

SECTOR 1

ILES TUAMOTU, ILES MARQUISES, ILES DE LA SOCIETE, AND ILES TUBUAI (INCLUDING OFF-LYING ISLANDS AND REEFS)

Plan.—This sector describes the islands, reefs, and dangers in a general area bound by 5°S and 42°S. and between 120°W and 155°W. The island groups are described from NE to SW, with the islands within the group being described in a N-S direction.

General Remarks

1.1 The islands described within this sector are the territories of **French Polynesia** (20°S and 140°W) and the **Pitcairn Islands** (25°S and 130°W), a dependency of the United Kingdom.

French Polynesia, an overseas territory of France, extends between 7°S and 28°S, and 134°W and 155°W. The territory covers four chains of archipelagoes, with a collective land area of 1,522 square miles. Papeete, on the island of Tahiti, is the administrative capital controlled by a governor of four archipelagoes, as follows:

1. Iles Marquises (Marquises Island) (9°S-140°W).
2. Iles Tuamotu (18°S-141°W).
3. Iles de la Societe (Society Islands) (17°S-150°W).
4. Iles Tubuai (23°S-150°W).

Most E and W transpacific routes and the international date line crossings by vessels on passages between groups of islands traverse the extensive area covered by this publication. These routes pass through or close to Papeete or Honolulu and are focal points for the South Pacific Ocean and the North Pacific Ocean. Other routes cross the ocean without passing through intermediate ports.

Generally, the passages between islands in a group or between groups of islands can be direct as safe navigation allows, since the track chosen is depended on location and distance. Most islands are located in the trade wind belts and within the limits of the Equatorial Currents. Favorable conditions are met by westbound vessels, except when a route follows in the Equatorial Countercurrent belt.

Fishing vessels, mostly Japanese, may be encountered anywhere in the Pacific. When engaged, fishing lines may extend to a length of 15 miles and reaching depths of 12 to 25m. Floats are attached to the lines, each at 0.1 or 0.2 mile span throughout the length. It is considered safe for all but deep-draft vessels to pass across midway between the floats.

In the vicinity of islands of French Polynesia, temporary fish havens exist. They are marked by orange lighted buoys with radar reflectors, and vessels should keep a minimum distance of 100m away from the area. Fish havens are artificial reefs constructed to attract fish.

Fish Aggregating Devices (FADS) are floating objects of varied shapes and forms to attract fish and may be encountered throughout a wide area anywhere from the Hawaiian coastal waters to the S of French Polynesian waters. FADS are normally moored in deep water and their positions may not be

charted. Occasionally, FADS are marked with orange floats, flashing light, and radar reflectors. Concentration of fishing vessels also may be found in the vicinity. FADS are subject to break adrift from their moorings.

Numerous aero radiobeacons transmit from the islands of French Polynesia and may be useful to marine navigation. However, they are subject to caution since most transmit from low-lying islands and atolls of Tuamotu, while others transmit from high islands of SW Tuamotu and Iles Tubuai. There are no marine radiobeacons in the French Polynesia.

In French Polynesian waters, many of the navigable channels between the barrier reef and the coast are marked by the IALA Maritime Buoyage (Region A) System, or by the Special System as described below; however, local systems may also be in use along remote islands.

The IALA system is used to mark channels from seaward through gaps in the barrier reefs and the main channels within the barrier reefs to essential harbors and anchorages.

The Special System is used to mark minor channels within the barrier reefs in cases where the direction of fairways cannot be determined without ambiguity. Beacons having the same colors and topmarks may be used in place of buoys in either system. These channels are marked, as follows:

1. On the landward side, the markings are red can or spar-shaped buoys, with a topmark of a red hemisphere with the round side pointed upward.

2. On the side of the barrier reef, the markings are green conical or spar-shaped buoys, with a topmark of a green cone pointing downward.

It was reported that positions of some fixed marks determined locally were not accurate. Beacons situated on shoals, below water dangers, and buoys are reported to be in poor condition and cannot be relied for their positions.

Near the SE end of Archipel Des Tuamotu certain atolls are occasionally used for nuclear tests. When such tests are in progress the French authorities would declare the site, and an area of about 100 miles radius within the site to be considered dangerous.

Entry to French Polynesia is permitted only through:

1. Papeete (Iles du Vent).
2. Hao (Archipel des Tuamotu).
3. Mururoa (Archipel des Tuamotu).

Entry through Hao and Mururoa is further restricted by the regulated areas mentioned above.

Centre de Sauvetage Maritime (CCSM), a center for coordinating rescue at sea, has been established in Tahiti. Participants may contact the center on VHF channel 10.

Iles de la Societe requires a report to the Captain of the Port, Papeete at least 3 days before arrival at the pilot station by all vessels carrying bulk hydrocarbon, vessels carrying dangerous cargoes, and by vessels over 120m in length. Such vessels are also required to keep a VHF watch within the territorial waters of the archipelago.

Winds—Weather.—Isle Marquises are in the heart of the trade belt, but there is much less steadiness of winds here than in the trade belt in N latitudes. E wind is the most prevalent, but over the E waters of the group there is an annual tendency for the trades to be deflected a little to the N or E, while in the W waters there is a tendency for a deflection to the S or E. The E to SE winds taken together are more pronounced, as a rule, from April to October, while the E to NE winds are more prevalent in the intervening months. Among the E islands the average velocity is about 11 knots and among the W islands 9 knots. The highest velocity occurs in July and August, when the average throughout the group is 12 knots.

Gales are of rare occurrence but the few heaviest squalls, so far as scanty records indicate, occur in December.

Iles Tuamotu, while in the nominal heart of the SE trade-wind belt, is strongly dominated by E winds. Over the E part of the group, E to ENE winds are most prevalent, while in the W part the majority are from E to ESE. The NE inclination is most prevalent from November to May, and the SE inclination, from June to October. Some 80 per cent of the annual winds are from directions between NE and SE.

Occasional barometric depressions cross Iles Tuamotu, sometimes resulting in squally weather and temporary reversal of the trades into winds from W quadrants. These are most likely to occur from January to March, but may occur earlier or later in the season. There is no known record of the actual frequency of tropical cyclones in these waters.

Iles de la Societe and Papeete enjoy a prevailing E wind. This holds true for each month of the year and the E part of the group, and for most months in the W part. Northeast winds predominate, or are equal to, those from the SE, in the E part, except in June and July; during these months the SE winds are about twice as frequent as those from the NE. In the W part of the group, the SE winds are more frequent than the NE except in March and November.

At Papeete, due to local conditions, the drift prevails from the NE, except in September, when it is superseded by both N and SW directions; and in June, when it is equaled by winds from E and SW. North winds are frequent from September to February, and SW winds from April to December. Land and sea breeze effects are said to be definitely indicated.

The average annual velocity at sea is 9 to 10 knots. The strongest winds average 11 to 12 knots in the winter months.

Tides—Currents.—The general direction of current flow throughout this sector is W. However, under certain conditions the flow of current, in some areas, is E.

Particular and constant attention must be paid to the current when navigating among the island groups. When near the islands the current is sometimes deflected and is always accelerated. Again, most of the islands are so low that it is often impossible to see them at night, and ships may be driven on the encircling reefs without any warning from soundings; their having in general deep water close-to.

In the Iles Marquises the current, propelled by the prevailing trade wind, is usually W, between WNW and WSW, with a velocity of 0.5 knot, sometimes increasing to 3 knots. If the wind dies or if there are changes to the currents to the W, the current slacks, and during persistent W winds its direction changes. After a week of W winds a current setting to the E

with a velocity of 3 knots, was observed in the strait between Hiva Oa and Tahuata.

The currents in the vicinity of Pitcairn and Henderson Islands, in the SE part of the sector, set to the W at 12 miles a day.

In the Iles Tuamotu the currents are quite irregular. During the settled weather and a steady trade, the set is usually 5 to 25 miles a day to the W; but when the wind is W, which is frequently the case between October and March, the current is reversed and sets to the E at 1 to 2 knots. The uncertainty, on these occasions, as to the direction in which the current may be running, requires great caution when navigating among this mass of islands.

Among the Isles de la Societe the W set of the current is fairly regular with a velocity of 12 to 20 miles a day.

Easterly winds, being the most frequent, the general set in the current is W. Strong winds from the W are liable to influence the velocity and at times reverse the direction of the current.

Normally, tidal currents within the passes or channels ebb and flood at 5 knots. Often there is a difference between the currents, with the outgoing current being the stronger. Generally the duration of slack water is greater at HW, but both slacks, if they exist, may be short. There are also locations where the tidal current cannot be counted on to turn with H and LW.

In those lagoons which have passes, the tidal current is generally felt for 6 hours in each direction. The range of the tide in the passes is about 0.6m.

The S and W sides of most of these atolls are low, so that when a S swell has been running for some days, it breaks and a great volume of water flows into the lagoon. This usually occurs between mid-June and mid-September, especially during the season of strong SE trade winds. On occasions, after the swell has been running out for some days, a current runs out continuously for several days without even a period of slack water. In addition, sure indications of a strong current, up to 12 knots, setting out through the pass are: the race being so strong that it can be seen from a considerable distance, and the wake of the current extending considerably seaward of the pass.

Regulations.—Navigation in the territorial waters of Iles Tuamotu-Gambier is authorized and subject to the rules of innocent passage for foreign ships in French territorial waters.

Iles Marquises

1.2 Iles Marquises, lying between 7°50'S and 10°35'S, and 138°25'W and 140°50'W, are composed of three fairly distinct groups that lie in a general SE-NW direction.

The SE group consists of **Futu Hiva** (Futu Iva) (10°30'S., 138°40'W.), Motane (Mohotani), Tahuata, Hiva Oa, and Fatu Huka.

The central group consists of **Ua Pou** (9°25'S., 140°05'W.), Ua Huka, and Nuka Hiva.

The NW group is formed by **Eiao** (8°00'S., 140°42'W.), and Hatutia.

All of these islands have the same aspect, they are high with abrupt and steep cliffy sides with few good anchorages. The

islands are of broken irregular form, and may be seen at a distance of 50 miles in clear weather.

The administrative authority for Iles Marquises resides at Baie Taiohae in Nuku Hiva. Landing is not permitted on any of these islands until pratique has been obtained from the administrative authority.

Hatutu (7°55'S., 140°34'W.) is about 3.5 miles long in a NE-SW direction and about 1 mile wide. The island rises to a height of 407m and is almost entirely cliff-ringed. A conspicuous rock, 147m high, lies off the island's NE side. It does not offer any shelter, with the exception of a cove in its S part, which is able to accept the anchoring of small vessels as well as their landing. The island is uninhabited.

Motu One (Ile de Sable) (7°52'S., 140°23'W.), ENE of Hatutu, is a coral shoal at the surface, about 0.8 mile long and which in, 1997, was still covered by a white sand dune emerging to a height of about 2m. Three years later, the sand dune had disappeared and the shoal was covered by 0.8m of water. It rests on a base that extends about 2 miles to the N and 8 miles to the E, and on which it is impossible to anchor.

Breakers were reported about 470 miles NNE of Ile de Sable in position 0°08'S, 139°19'W. Breakers and discolored water have been reported 120 miles SW and 135 miles WSW, respectively, from the above position. A depth of 27m has been reported about 360 miles WNW of the position.

1.3 Eiao (8°00'S., 140°42'W.) lies SW of Hatutu; it rises to a height of 576m. The S coast of the island is formed by a perpendicular cliff, but the NW and W coasts are indented by several small bays. Its SE point displays a noticeable rock in the shape of an obelisk

The channel separating Eiao from Hatutu should be navigated with caution. A 6.4m shoal lies in the E entrance, while a reef, which has been reported to break, lies in the middle of the passage. The current generally sets NW through the channel with some strength.

The passage between Eiao and Motu Iti, further S, reportedly contains depths of 20 to 60m, and will be described with Nuku Hiva. Banc Hinakura, with a depth of 38m, lies 13 miles WNW of Eiao. A depth of 35m was reported 12 miles SW of the S extremity of Eiao, while a depth of 27m lies about 11 miles further SSW.

One can anchor at the opening of Vaituha Bay on the NW coast, in 27m of water, sand and mud, keeping the SW point of the bay bearing 247° at 0.2 mile.

In Charner Bay, also to the NW of the island, there is good anchorage, in 30m, sand and gravel, but it is not well sheltered from the swell which is felt strongly there.

Nuku Hiva (8°52'S., 140°08'W.), the principal island of Iles Marquises, lies SSE of Eiao. The island is 14 miles long E-W and has a maximum width of 11 miles. It is mountainous and rises to a height of 1,186m in its NW part. The mountains are steep toward the sea; the peaks are often hidden by clouds, giving them the appearance of a table mountain when seen from a distance.

Numerous waterfalls can be seen on its N and S sides; the most remarkable falls from a height of 600m, 1.5 miles ENE of the S extremity of the island.

Tides—Currents.—Northward of the N coast of the island the current always sets strongly to the W, however, off the NE

extremity the current sets onto the coast. Off the SE extremity of the island, it is somewhat variable, sometimes setting E, though it usually follows the direction of the trade wind. Off the S central part the current generally sets strongly W.

Cap Atupa Atua (8°49'S., 140°00'W.) is the NE extremity of the island. On the extremity of the point, and at two-thirds of its height, are two rocks, which when seen from certain directions appear like grotesque statues of a man and a woman. A remarkable rock lies about 1.3 miles further SW.

The coast between Cap Atupa Atua and Cap Tikapo, 8 miles S, is indented in its N part by Baie Hatuatua, which is exposed. The remainder of this coast is formed by almost perpendicular cliffs.

1.4 Cap Tikapo (8°57'S., 140°00'W.), the SE extremity of the island, is high and steep-to. Above its cliffs is a mass of rocks; seen from SE and S these rocks resemble a tower, but when seen from SW they incline toward the sea. A rock, 1m high, lies 0.3 mile S of the cape; it breaks in a heavy sea. Vessels should avoid attempting to pass between the rock and the cape as it has been reported to be encumbered with uncharted submerged rocks.

From Cap Tikapo, the coast trends WSW to **Pointe Chickakoff** (8°58'S., 140°10'W.), the SW extremity of the island. It is rocky and the bays on the coast, which provide shelter, are described from E to W.

Baie de Controleur, entered immediately W of Cap Tikapo, recedes 3.8 miles NNW. The head of the bay is divided by two high points into three inlets, each extending NW.

Anchorage.—Anchorage is available for small vessels in any of the inlets, the central one possessing a wharf which may be subject to a heavy surge. Larger vessels may find anchorage, in a depth of 26m, sand and mud, with the point dividing the central cove from the W cove bearing 234° and about 0.4 mile distant. Anchorage in any of the coves provides shelter in NE winds, but may be subject to a heavy swell at the outer berths.

The two remains of ancient volcanoes constitute shoals covered by 46 and 49m of water about 27 miles WSW of Nuku Hiva.

1.5 Baie Taiohae (Anna Maria Bay) (8°56'S., 140°05'W.) (**World Port Index No. 56015**), entered between Sentinelle de l'Est, 4.5 miles W of Cap Tikapo, and Sentinelle de l'Ouest, 0.8 mile farther W, affords the largest and safest anchorage in Iles Marquises. The residency of the French Government Administrator for Iles Marquises is situated on the E shore, 1.3 miles within the entrance. The general depths are from 50m in the entrance to 10m W of the residency. An obstruction has been reported to lie about 0.3 mile WSW of the residency.

Depths—Limitations.—A pier, with depths of 5 to 7m alongside, is situated 0.4 mile S of Fort Collet; this pier is used by fishing vessels. In heavy surf, mooring at this pier is dangerous.

Aspect.—Approaching from the S, the bay may be identified by the high crescent of mountains around it, and by a large white cross of crystalline rock in the face of the perpendicular cliff on the E side of the entrance. The islets on each side of the entrance are difficult to identify from the W, but Pointe Arquee, close within the E entrance, is an excellent landmark. A red-roofed building, the ruins of a fort, and a monument are useful



Baie Taiohae

landmarks. Lights are shown from the ruins and the head of the bay.

Anchorage.—Anchorage is available, in depths of 13 to 20m, sand, about 0.3 mile off the light shown from the ruins, with the light bearing between 050° and 075°. An obstruction lies 0.3 mile W of the ruins of Fort Collet. Anchoring is prohibited within the bearing between 347.5° and 010.5° of the light sectors. Small craft anchor W of the light.

This anchorage has been reported to be sheltered from all but S winds, but from April to September a swell may be felt, and squalls from the NE or NW may be experienced.

The coast for about 3.5 miles W of Baie Taiohae is rocky and is broken by several small bays. The bottom near the coast is strewn with rocks; a large vessel should give it a good berth.

Baie des Tai Oa (Tai Oa), 3.5 miles W of Baie Taiohae, is entered between a black rocky point on the E, and a cliff with a jagged peak above it on the W. In a strong wind the sea breaks heavily on the E entrance point, and the entrance to the bay is always rough.

A point separates two creeks at the head of the bay. An anchorage, with little room to swing, may be taken, in 12m, with the point separating the two creeks bearing 300°, distant 0.2 mile. Should the vessel drag during a squall, it will be unable to bring up before being drawn onto the rocks.

The W coast of Nuku Hiva trends NNW from Pointe Chickakoff, 1.5 miles W of Baie des Tai Oa to **Pointe Hinahaapapa** (8°49'S., 140°13'W.), 11 miles distant. This side of

the island is known as Henua Ataha or Desert Land; instead of being steep and abrupt, it slopes up gradually to the mountains. The control tower and the airport building are prominent in the vicinity of Pointe Hinahaapapa.

Baie Marquisienne, 3 miles NNW of Pointe Chickakoff, can be recognized by the red cliffs near its entrance. Vessels with a length of 85m or less may anchor temporarily, in a depth of 24m, with the S point of the bay bearing 157°, distant 0.2 mile.

Baie Haopu, 5.8 miles N of Baie Marquisienne, has an anchorage for vessels up to 85m, sheltered from E winds, in a depth of 24m; however, swell affects in the bay and landing is difficult. Vessels anchor midway between the S point of the bay and an isolated rock on the N shore. Care should be taken to avoid the rocky head, which uncovers, located about 90m SW of the isolated rock.

From Pointe Hinahaapapa, the coast trends in an E direction for a distance of 13 miles terminating in Cap Atupa Atua. It is indented by several bays, but during the season of NE winds, which veer to the N, they do not afford shelter.

1.6 Baie Hakaenu (8°48'S., 140°10'W.) is located W of a steep wall of black rock; its entrance is difficult to distinguish. The bay is about 0.2 mile wide and about 0.4 mile deep. There is good shelter from E winds, but is accessible only to small vessels. The depth in the middle of the bay is about 14.6m, sand. Baie Hakaenu offers better holding ground with less swell effect. The N extremity of the island lies close E of Baie Hakaenu. Baie Vaekao (Vaekao-Hapapani) lies 1.5

miles SE of Baie Hakaehu. Baie Hakapa lies 1.8 miles farther ESE.

Baie Atiheu (8°50'S., 140°04'W.) is entered E of a comparatively low, bare point, 2 miles E of Baie Hakapa, and a bare point 0.8 mile NW, which may be recognized by a bluff of black rocks 75m high. The bluff is steep-to with a depth of 29m close to its base.

Anchorage.—Anchorage may be obtained, in depths of 20 to 26m, about 0.4 mile off a conspicuous church situated at the head of the bay, with the church bearing 171°. Violent squalls from the SE sometimes blow from the steep mountains in the inner part of the bay. With NE winds, the sea is sometimes heavy, and nearly always rough.

Baie d'Anaho (Baie Anaho) (8°49'S., 140°03'W.) is separated from Baie Hatiheu by a broad promontory about 0.8 mile wide, which rises to a height of 300m.

With winds from the SE to ENE, the sea in the bay is calm, but when backing to NE, the swell begins to be felt; ESE squalls blow over the narrow isthmus separating this bay from Baie Hatuatua, and the current in the bay sometimes sets strongly W.

The depth in the bay decreases gradually from about 46m in the entrance to 9.1m about 0.1 mile from the head.

The E shore of the bay is free of dangers, but the W side of the head of the bay is fringed with a coral reef, which dries in places; an inlet in the reef offers a landing place.

Anchorage.—Anchorage may be obtained in any part of the bay, but vessels usually anchor in a position about 0.3 mile S of Pointe de la Mesange (Pointe Mesange), on the W side of the bay, 1 mile within the W entrance, in 21m.

Baie d' Hataivea (Baie Hataivea), a large exposed bay, lies close E of Baie d'Anaho. Poiku, a flat-topped island, lies close N of its E entrance, and Rocher Motu Iti, a pointed rock, lies close NW of its W entrance point. Cap Atupa Atua lies 1.3 miles E of the bay.

Motu Iti (8°41'S., 140°37'W.) WNW of Nuku Hiva, consists of three islets. The largest rock is volcanic and rises to a height of 220m. With the exception of a little vegetation on its W side the rock is barren.

The other two are also barren and lie close E. Some rocks, which are awash, almost join these two islets, and submerged rocks extend E from the E islet.

The islets are surrounded by a bank of muddy sand and coral, with depths of 24m within a distance of 2 miles. There are depths of 11 to 15m near the W side of the largest island.

Banc Lawson (8°42'S., 140°46'W.) has a least depth of 14.3m charted 9.5 miles WSW of Hatu Iti.

Banc Clark (8°05'S., 139°38'W.), with a least reported depth of 9.3m, lies 50 miles NNE of the NE extremity of Nuka-Hiva. The bank is about 4 miles in extent. Two shoals, covered by 35 and 42m, respectively, lie 25 and 35 miles WNW of this shoal. It is advisable to avoid this area due to the suggestive presence of submerged reefs.

1.7 Ua Huka (Washington Island) (8°55'S., 139°33'W.) is dominated by a high chain of mountains that rise to a height of 855m; spurs and valleys radiate to its coasts.

There are several detached rocks off the N, W, and S coasts. There are depths of 40 to 46m, 0.5 to 2 miles offshore, all around the island.

The island, which is round in shape and slightly indented on its S side, has many bays and coves, but the principal anchorages are along the S coast.

Pointe Teho te Papa (8°57'S., 139°29'W.) is the SE extremity of the island and Pointe Tekeho, 5.3 miles W, is the S extremity. From the W, Pointe Tekeho appears to be detached from the island and resembles an islet.

Motu Haane, 155m high, shaped like a sugarloaf, and formed by dark violet-red rocks, lies 2.3 miles WNW of Pointe Teho te Papa.

Baie d'Hananai is entered close NNW of Motu Haane. Rocks, with depths of less than 1.8m, lie near the head of the bay. Large vessels may anchor about 0.1 mile W of Motu Haane, in depths of 30m, over a sand bottom, good holding ground. This anchorage is exposed, however, with a current which tends to swing the vessel across it. Better anchorage might be had E of Motu Haane, with its N point bearing 270°. Small vessels anchor in the center of the bay, about 0.3 mile off the bay's head, in a depth of 15m.

Motu Papa, 28m high, lies 0.1 mile offshore, 1.4 miles WSW of Motu Haane. The islet has reddish perpendicular sides, and a flat top inclined towards the mainland.

Baie de Vaipae (Baie Invisible) is located 1 mile W of Motu Papa. It is a narrow bight that indents the coast about 0.5 mile in a NNW direction. The bay may be identified when directly off its entrance by the sandy beach at its head. At the entrance, where the depth is 31m, there is always a heavy choppy sea. Only small vessels can use this deep bay, as there is no room to swing. With winds from the N to E, the sea is calm inside, but with winds from the SSE the surf sets in and it becomes dangerous. On the W side of the bay is a large hill and a light shows from a beacon in the vicinity of Mata te hotu.

1.8 Pointe Tekeho (8°57'S., 139°35'W.) is a black cape, 107m high. When this point is seen from a distance, it appears as a wedge, inclined toward the beach.

Ile Teuaua lies 0.6 mile W of Pointe Tekeho and Ile Hemeni, 97m high, lies 0.1 mile W of Ile Teuaua. Motu Keo Keo lies close off the W side of Ile Hemeni.

Baie Chavei (8°57'S., 139°35'W.) is entered 1 mile NW of Pointe Tekeho. There is anchorage, in a depth of 20m, with the peak of Ile Hemeni bearing 190°, and Pointe Tekeho bearing 107°; the bottom is sand. This anchorage is sheltered with winds from the N through E to SE, and is protected from the swell by the islands.

Ua Pu (Ua Pou) (9°23'S., 140°05'W.), an island about 8 miles long N-S, with a width of 7 miles, rises to a height of 1,232m near its center. The tops of its mountains are more jagged than those of the other islands in this archipelago, and some of the summits resemble towers or spires when seen from the distance. In the SE part there is a remarkable table mountain, topped on each side by spire-like pinnacles.

A number of islets, some of them remarkable, lie within 0.5 mile of the coast.

On the W side of Ua Pou are numerous villages and several anchorages. It is generally calm, but squalls are occasionally experienced.

The whole E coast is exposed to wind and sea, and caution is necessary in its vicinity as a strong W current sets onto it.

Motu Mokoe (9°22'S., 140°01'W.) consists of two islets that lie about 0.5 mile off the NE extremity of the island. These two barren islets are separated by a narrow dangerous channel. Depths of 32 to 40m, sand, have been reported about 2 miles N of these islets.

Rocher Tapukava lies 0.2 mile SE of the S extremity of the island and **Motu Oa** (9°29'S., 140°03'W.), 112m high, lies 0.8 mile SSE of the same point. Rocker Tamuko and Rocher Papatu, 86m high, lie 1.3 miles and 1.8 miles NE, respectively, of Rocher Tapukava.

Motu Takahe (9°28'S., 140°04'W.), 237m high and shaped like an obelisk, lies 1.8 miles NW of Motu Oa.

From Motu Mokoe, the E coast trends SSE to the island's S extremity, and is indented with numerous bays.

Baie de Hakahau (9°21'S., 140°06'W.) is about 1.8 miles WNW of Motu Mokoe. A breakwater extends about 165m WSW from a position 152m SSW of Pointe Mataiva, the E entrance point of the bay.

Anchorage.—Anchorage in the bay is partially sheltered from the prevailing winds. In good weather, a vessel may anchor in the entrance to the bay, with Point Mataiva bearing 120°, in a depth of 16m; the holding ground is good.

Caution.—It has been reported (1990) that, since the completion of the breakwater, Baie de Hakahau is subject to silting in its SE part and to scouring in its SW part.

1.9 From the N extremity of the island the W coast trends SW about 4.5 miles to **Pointe Punahukua** (9°23'S., 140°08'W.), its W extremity, then about 7.5 miles SE to the S extremity of the island. It is indented by several bays; some of them afford convenient anchorage.

Baie de Hakahetau (Haka Hetau) (9°21'S., 140°06'W.) can be recognized by the beach that borders the head of the bay, and by the coconut palm plantations and a chapel. Roches Rouges (Red Rocks), on the E entrance point, is conspicuous. Motu Koio, 90m S of Roches Rouges, and Motu Kivi, 8m high, located on the E side of the beach 0.3 mile S of Motu Koio, are good landmarks. Vessels can anchor, in 23m, good holding ground, with Motu Koio bearing 094° and Motu Kivi bearing 153°. Small vessels may anchor, in 12m, sand, with Motu Koio bearing 035°.

Baie de Vaiehu (Vaieo Bay) (9°23'S., 140°08'W.) is entered between Punahukua Point and Pain de Sucre (Sugar Loaf). Pain de Sucre, 143m high, dominates the S part of the bay, but is difficult to distinguish when approaching from the N. It is preferable to approach the bay from the SW and anchor when the NW side of the entrance bears 321° and Pain de Sucre bears 181°. The anchorage, in 20m, sand and mud, is protected from E winds.

From Pain de Sucre, the coast trends SSE to Baie Hakatao. Baie de Hakamaui, located about 1.5 miles SE of Pain de Sucre, may be recognized by a conspicuous island off its entrance and a conspicuous church within. The bay offers anchorage, in a depth of 20m, over good holding ground, with the church bearing 240° and about 0.3 mile distant.

Baie Hakatao (9°27'S., 140°05'W.) may be identified by a village with a chapel, and a group of three white crosses, all

standing on the bay's S side. Anchorage is available midway between the rocky entrance points, on holding ground reported to be good, but depths not stated. This anchorage is exposed to a heavy swell and winds from the SE.

The S group of Iles Marquises includes four islands; from N to S they are Hiva Oa, Tahuata, Motane, and Fatu Hiva. Ilot Fatu Huku lies N of Hiva Oa and Rocher Thomasset lies NE of Fatu Hiva.

1.10 Fatu Huku (9°27'S., 138°55'W.), E of Ua Pou, is 361m high. The coasts of the islet are abrupt cliffs and steep slopes. It is surrounded by a bank with depths of 9 to 12m. There are two heads, one with depths of 5.4m, 2 miles NNW, and the other with depths of 6.8m, 1.3 miles NE of the islet; the sea breaks on these heads.

Hiva Oa (9°47'S., 138°58'W.), 22 miles long E-W and about 7 miles wide, is the largest and most populous of the Iles Marquises. The island is mountainous with the highest being Mont Temetiu (Mont Temeti), 1,189m high, on the W side.

The N coast of the island is indented by numerous bays. The principal ones, those with anchorages sheltered from SE winds, are, from E to W, Puamau, Hanatekua, Hanaiapa, and Hanamenu. There is a rock, awash, about 0.5 mile N of the N extremity of the island.

The S coast is bordered by abrupt cliffs for 14 miles from the E extremity and has no shelter. The W part of the S coast forms Baie des Traitres (Vipihai). In the N part of the bay are the principal villages Atuona and Baie Tahauku, a sheltered anchorage for small ships.

The coast to the W of Baie des Traitres is overhung by heights that rise more than 500m, with abrupt slopes that offer no shelter.

Cap Balguerie (Matafenua) (9°45'S., 138°48'W.), the E extremity of Hiva Oa, terminates a long, high, rocky promontory. It is surrounded by several isolated rocks; the highest, Motu Ofio, is 20m, located off the SE side, and Motu Tabu (Motu Tapu), in the shape of a truncated cone, lies to the NW of the cape.

1.11 Baie Puamau (Perigot) (9°46'S., 138°52'W.) is surrounded by mountains. The bay is entered between Pointe de l'Obelisque (Pointe Tahanamoia), on the E, and Bastion Point (Pointe Mataai), about 0.7 mile NW.

Banc Boulard, with a depth of 4.6m, lies about 0.2 mile WNW of Pointe de l'Obelisque. Rochers Jacquemart, also known as Motu Ana Kei and Motu Ana Momo, lies 180m S of Banc Boulard; these two rocks lie close together and are difficult to identify when approaching from the W.

A small concrete jetty is situated on the E side of the bay at about 0.5 mile SW of Pointe de l'Obelisque, often a heavy swell exists at the jetty.

The N coast of the island trends WNW from Bastion Point for a distance of 4.5 miles, then N about 3 miles to Pointe Mautau (Cap Matau), the N extremity of the island.

Anchorage.—Anchorage, in depths of 20 to 23m, sand, good holding ground, is available with the hill on Pointe de l'Obelisque, seen between Rochers Jacquemart bearing 355° and with Bastion Point in line with a point located about 0.8 mile NNE of it bearing 105°. There is always a swell, and with a fresh breeze from the NE to NW the sea becomes heavy in

the bay; the current enters the bay and sets directly onto Pointe du Bastion.

Baie Anahi (9°44'S., 139°56'W.), 3.5 miles W of Bastian Point, affords good anchorage with winds between the SE and ENE. The depths gradually decrease from 26m in the entrance toward the head of the bay.

A rock, awash, lies about 0.9 mile N of **Pointe Mautau** (9°42'S., 138°59'W.).

Baie Hanatekua (Hana Tekua), 0.5 mile W of Pointe Mautau, affords anchorage to small craft, in a depth of 26m over sand, with the NE point bearing 250°. Anchorage may also be taken outside a line joining the two entrance points, in 29 to 38m, good holding ground.

Baie Hanaiaapa (Hana Iapa) (9°43'S., 139°00'W.) is entered between Pointe du Dome and Pointe Jouan, 0.5 mile SW. It can be recognized by La Borne, 15m high, located 0.2 mile N of Pointe Jouan, and a waterfall 1 mile W of the bay. A number of unmarked reefs lie about 160m SW of La Borne.

Anchorage.—There is good anchorage in the middle of the bay, in 20m, sand, sheltered from E winds.

Baie Hanamenu (Hana Menu) (9°46'S., 139°38'W.), which is entered between Pointe Gaussin and Pointe Bonnard, 0.6 mile WSW, is divided into two parts by Grosse Tour, a steep point of dark red rock, 224m high.

Anchorage.—The best anchorage is in the E bight, in 17m, with the N extremity of Grosse Tour bearing 290° and a grotto S of Pointe Gaussin bearing 040°. Violent SSE squalls are sometimes experienced at this anchorage, especially at night.

Pointe Kiukiu (Pointe Kiutiu) (9°47'S., 139°10'W.) is the W extremity of Hiva Oa. From Pointe Kiukiu, the coast trends SE for about 10 miles to **Pointe Teahoa** (9°51'S., 139°01'W.); it is rugged, has steep cliffs, and is inhospitable.

Baie des Traitres, N of Pointe Teahoa, is about 2 miles wide. The bay is open to the E, and its S part is exposed to the wind and sea.

Ilot Hanake, a rocky islet 37m high, lies about 0.2 mile offshore, 2 miles N of Pointe Teahoa.

1.12 Atuona (9°49'S., 139°02'W.) ([World Port Index No. 56010](#)) stands at the head of a small bay about 0.4 mile N of Ilot Hanake. This is the seat of the Bishop of Iles Marquises and has a radio station.

Depths—Limitations.—There is a concrete jetty close to the mole.

Aspect.—A monument is situated about 0.5 mile NW of Pointe Feki; it may be obscured by coconut palms. The light standing on the point is prominent.

Anchorage.—Anchorage may be taken, in 28m, sand and coral, 0.3 mile off the light shown from Point Feki, with the light bearing 003°. For vessels remaining overnight it is preferable to anchor with the E extremity of Ilot Hanake bearing 270° and the light bearing 334°, in a depth of 35m.

Anchorage may also be taken in **Baie Tahauku** (Taahuku Bay), which is entered E of Pointe Feki, about 0.5 mile NNE of Ilot Hanake.

The anchorage is in 10m, good holding ground, with the light on Pointe Feki bearing 253° and the head of the bay bearing 022°. Ships over 100m in length, and drawing more than 7m, should not use this anchorage. Two anchors should be used to minimize the vessel's swing.

At night, vessels should approach these anchorages by keeping in the white sector of Atuona Light bearing between 332.5° and 339.5°, then adjust course as required to the anchorage.

The current generally sets W along the S coast of Hiva Oa, but in **Baie des Traitres** it follows the trend of the coast and sets toward Pointe Teahoa (Flat Point), which is located 0.5 mile ENE of Ilot Anakee. After a rain its strength is considerably increased by the flow of the numerous streams which empty into the bay.

Canal du Bordelais (Haava), which separates Hiva Oa from Tahuata, S of it, is 2 miles wide, deep, and clear of dangers. There is always a strong wind and a high sea in this channel. The current generally sets W at 2 to 3 knots, but after W winds have prevailed for some time the current is reversed and sets E at about the same rate.

Tahuata (Tahu Ata) (9°57'S., 139°05'W.) is about 8 miles long N-S and about 5 miles wide. A narrow ridge of mountains that rises to a height of 472m extends the length of the island. Spurs descend from the mountains to the coast, separated by deep narrow valleys watered by streams.

The steep E coast of the island should be avoided; the only anchorages are on the W side.

Baie Hana-moe-noa, 2.3 miles SW of the N extremity of the island, affords anchorage for small vessels, in 10m, sand and gravel, good holding ground.

1.13 Baie Vaitahu (9°56'S., 139°07'W.), about 1.8 miles SSW of **Baie Hana-moe-noa**, lies under the highest part of the island. A high, rocky hill stands above the S entrance point of the bay; the N entrance point rises more gradually. There are two beaches at the head of the bay and the village of Vaitahu may be seen; there is a chapel here with a red roof, while a red-roofed government office building surmounted by a flagstaff is also visible.

Anchorage.—Large vessels anchor, in a depth of 50m, sand, with the flagstaff bearing 108°, 0.4 mile distant. Smaller vessels anchor, in a depth of 20m, sand bottom, with the flagstaff bearing 103° and about 0.2 mile distant. When the trade wind is blowing, violent squalls sweep down the valleys at the head of the bay; as the bottom slopes steeply, there is always the danger of dragging.

Landing can be affected at the foot of the cliff N of the beach. A footpath leads from this landing to the village.

Baie Hapatoni lies about 2 miles S of **Baie Vaitahu**. A rock, resembling a tower, marks the entrance on the S side of the bay, and a chapel is visible at the bay's head.

Vessels should drop anchor in depths of at least 60m to allow for adequate swinging room. The holding ground is poor. There is a landing place on a beach N of the village and another in the SW part of the bay.

Cap Te Hope o Te Keho (Tehopeote Keho) (10°02'S., 139°07'W.) is the S extremity of the island. A rock, with a depth of 6.5m, lies 0.9 mile offshore, 3.3 miles NNE of **Cap Te Hope o Te Keho**.

Motane (Mohotani) (9°09'S., 138°50'W.) lies E of Tahuata. It is 520m high in its S part, becoming gradually lower toward its N end, which terminates in a rocky point.

Ilot Terihi lies off the SE extremity of the island; the jagged top of this high islet, with a needle rock standing on it, affords a good landmark.

The E coast of Motane is formed by cliffs intersected by ravines and landslides. Its S and SW coasts are bordered by high, vertical cliffs.

Anchorage.—Anchorage for small vessels may be taken in Baie de Puhioono, about 0.6 mile SW of the N extremity of the island.

1.14 Fatu Hiva (10°28'S., 138°39'W.), the S island of Iles Marquises, lies SSE of Motane. The island is 8 miles from N to S and 4 miles wide; it rises to a height of 960m in the S part.

The E side of the island is extremely rugged; steep ridges extend from the mountain ranges terminating in high precipices over the sea. On the N and S ends the land slopes more regularly toward the sea.

The most noticeable feature on the W coast is Pointe Tataihoa, the SW extremity of the island, which is a rocky cliff, 213m high, overhanging the sea. Ships passing within 3 miles of the W coast are exposed to a heavy swell, and strong squalls may be experienced even though the prevailing weather is calm.

Baie Havana (Hana Vave) (10°27'S., 138°39'W.) is entered 2.5 miles SSE of Pointe Aimoua (Aimua), the NW extremity of the island. From the W the bay may be identified by a 125m high group of pinnacle shaped rocks. From the E, two groups of rocks located about 0.2 mile E of the SW corner of the bay's head; the rocks are 120m high. The bay is entered on a course of 103°, with the N pinnacle of the N group of conspicuous rocks in the bay's SW corner, mentioned above, and a conspicuous white tooth-shaped peak half way up the mountain slope to the E in alignment. Vessels anchor in depths of 40 to 60m.

Caution.—Caution is advised as the holding ground is indifferent, and as the bottom slopes steeply seaward, vessels have been known to unexpectedly drag their anchors and drift out to sea. Violent squalls blow down the valley towards the anchorage.

1.15 Baie d'Omoa (10°30'S., 138°40'W.) is entered between Pointe Motahumu on the N and a black rocky bluff on the S.

To enter the bay, steer 095° for Pierre Bonhomme, a conspicuous slender pinnacle rock, and anchor when Pointe Motahumu bears 007° for small vessels, or 017° for large vessels. Depths at both positions are 20m and 30m, respectively, over sand. The anchorage is poor and a heavy swell rolls into the bay. During W winds, the bay is untenable.

It was reported that tooth-shaped peak is not easily identifiable; however, anchorage can safely be approached by steering for the center of the bay.

A concrete jetty is situated at Pointe Motahumu; landing is usually difficult as heavy swells prevail.

Rocher Thomasset (10°21'S., 138°26'W.) lies ENE of the N extremity of Fatu Hiva and is 4m high; partially emerged from an underwater mount, covered by about 41m of water at about 500m from the rock. Caution is necessary when navigating in this vicinity at night.

A shoal, with a depth of 18.3m, was reported to lie 26 miles NE of Rocher Thomasset.

Pitcairn Island and Adjacent Islands

1.16 Pitcairn Island, Henderson Island, Ducie Atoll, and Oeno Atoll are British possessions. They form the district of Pitcairn and are administered under the United Kingdom High Commissioner to New Zealand, as Governor, by a council consisting of a Chief Magistrate and four other officers. Though far apart, they form a separate group lying off the SE end of Iles Tuamotu, and about 1,170 miles SE of Fatu Hiva in Iles Marquises.

Ducie Atoll (Ducie Island) (24°40'S., 124°47'W.), is the E island of the group. A low islet covered with trees lies on the reef on the N and NE sides of the lagoon; several smaller islets, also covered with trees, lie on the reef on the S side of the lagoon. Breakers extend for 0.5 mile S from the atoll.

Henderson Island (24°22'S., 128°19'W.) is about 31m high, with a flat surface covered with trees and dense undergrowth, except for its S extremity. On all sides except the N it is bounded by perpendicular cliffs, about 15m high, and considerably undermined by the sea. The island is about 5 miles long in a N-S direction and 2.8 miles wide. A reef extends about 0.1 mile from the NW point.

Anchorage.—Anchorage for small vessels, in 27m, sand and coral, may be taken 0.5 mile SW of the NW extremity of the island. Larger vessels may anchor farther out, in 37 to 46m, but with NW winds, this anchorage becomes untenable.

There is a deep, but narrow, boat passage through the reef, 0.3 mile S of the anchorage.

1.17 Pitcairn Island (25°04'S., 130°05'W.), about 2 miles long in an ESE-WNW direction, rises to a height of about 305m. The shore consists of high and almost vertical cliffs, except in one or two places. The island is thickly covered to the summit with luxuriant vegetation and the cliffs are skirted at their base with thickly branching evergreens.

Adamstown is situated on the N side of the island and is connected with the landing place at Bounty Bay by a path.

The most convenient anchorage is off Bounty Bay, on the NE side of the island, in 23 to 31m, about 0.4 mile from shore; St. Paul's Point is in line with, or just open E of Adams Rock and Youngs Rock bearing 284°. The bottom is sand with rocky patches. The best anchorage with E winds of any strength is in 22m, 0.3 mile offshore, with Youngs Rock bearing 058° and Point Christian bearing 180°. The preferred communication with the shore is in the islanders' own boats.

Currents in the vicinity of Pitcairn Island generally set to the W at about 0.5 knot, but frequently flow at greater rates.

Oeno Atoll (23°56'S., 130°44'W.) is a low and dangerous atoll; the shallow lagoon is completely surrounded by the coral reef. Near the center of the atoll there is a large island covered with trees; Sandy Island lies in the center of the N part of the reef. The N ends of both islets were being eroded, and the S end of Sandy Island and the E extremity of the center islet were extending. Two towers, each 24m high and about 1 mile apart, stand on the reef.

Iles Tuamotu

1.18 Iles Tuamotu (Archipel des Tuamotu), consisting of 78 islands, almost all of them atolls, extends for about 950 miles in a general SE direction from a position about 180 miles N of Ile Tahiti. It is divided into two groups for administrative purposes; Iles Gambier and their dependencies forming the E group, and Iles Tuamotu forming the W group.

Iles Gambier and their dependencies, with the exception of Temetagi, lie E of 140°00'W.

Iles Tuamotu, with the exception of Pukapuka, lie W of 140°00'W. The islands in the S central part of Archipel des Tuamotu include all those which lie S of 18°00'S, between 140°W and 146°W. They extend in the S center from **Temetagi** (21°40'S., 140°37'W.) to **Hao** (18°15'S., 140°55'W.) and **Marokau** (18°05'S., 142°20'W.). On the N of 18°S, from **Amanu** (17°49'S., 140°46'W.) to **Napuka** (14°08'S., 141°12'W.), and about 10 miles NW where Tepoto lies.

Navigation within the territorial waters of Fangataufa Atoll and Mururoa Atoll has been temporarily suspended. See Pub. 120, *Sailing Directions (Planning Guide) Pacific Ocean and South-east Asia* for details.

Iles Gambier (23°10'S., 134°57'W.) lie near the E end of Iles Tuamotu. The group consist of ten islands and numerous islets enclosed by or settled on a barrier reef.

1.19 Ile Mangareva (23°07'S., 134°59'W.), the largest of four main islands, maintains a permanent population. The majority of the population surrounds the main port of Rikitea, on the E side of the island. There is another port at Totegegie, on the barrier reef, 5 miles NE. On the NE side of the barrier reef there are many low detached islets covered with green vegetation. Elsewhere, with the exception of Banc de Tokoruaat, its W extremity, the reef is submerged; the depths are generally shallow.

The islands lie within an extensive lagoon. Most are of volcanic formation and the larger islands are high, covered with high grass, reeds, and ferns. Some islets are in the lagoon, but most lie on the NE of the reef and they are wooded.

The barrier reef rises steeply from great depths on its seaward side, except for the gradual rise from the SE. The NE part of the barrier is almost awash. There are three passes through the reef, which are known as Passe de l'Ouest, Passe du Sud-Ouest, and Passe de Sud-Est. All the passes give access to anchorage in the outer part of the lagoon.

From a distance, the island may be identified by Mont Duff, 441m high, and rising to two wedge-shaped peaks at its SW end. From the NW, Mont Duff and Mont Mokoto appear as two pointed peaks close together.

Pilotage.—Pilotage is not compulsory, but is recommended for the channels and anchorages listed below. The pilot will meet vessels at the entrance to Passe de l'Ouest.

Caution.—As Passe du Sud-Ouest and Passe du Sud-Est are exposed to the prevailing sea, the swell may reduce the available depth of water over the bar. It has been reported that the buoys and beacons marking the dangers and channels mentioned below are unreliable.

Passe de l'Ouest (23°06'S., 135°03'W.), which lies between Ile Mangareva and Ile Taravaïis, is obstructed by two bars. The

outer bar, which has general depths of 5.2 to 10m, has a least charted depth of 6.7m on the recommended track. The inner bar, which is buoyed, shows depths of 4.4 to 10m, with a least depth of 4m just NE of the track line. Vessels are advised not to use the channel until late morning or early afternoon, when the sun makes it easy to spot the landmarks and shoals.

Pass du Sud-Ouest is entered by keeping Pointe Teonekura and Pointe Mataihu in line bearing about 037°, but local authorities report that the points are difficult to see from seaward and caution is advised. Continue on this range until the N end of **Ile Agakautai** (23°09'S., 135°02'W.) is in range with the W extremity of Ile Taravai, about 270°. Alter course to port to avoid a shoal with a least depth of 3.5m, and join the recommended track shown on the chart.

Caution.—The track line shown on the chart passes close aboard, or over, isolated shoal depths of 5 to 8.2m. Isolated depths of 5.6 to 10m lie within 91m of the turn point mentioned above.

1.20 Passe du Sud-Est is approached from seaward with the summit of Ile Kamaka ahead bearing 326°. When the W side of Ile Akamaru is in line with the W end of Ile Makapu, steer for them on a bearing of 014°. Then, steer various courses to avoid isolated shoal depths to the anchorage SE of Ile Aukena. This pass requires local knowledge.

An inner channel running from Passe de l'Ouest around the S side of Ile Mangareva to Port Rikitea is best seen on the chart. The channel is marked by various ranges, buoys, and beacons; and passes over a least charted depth of 7.7m as far as the anchorages off Mount Duff. The channel across the reef stretching between Ile Mangareva and Ile Aukena has a least charted depth of 5.1m.

Anchorage.—Sheltered anchorage is available to vessels with local knowledge in Baie de Taku, off the NW side of Ile Mangareva. The approach to the bay has a controlling depth of 7.3m.

Anchorage for vessels on the inner channel is available, in depths of 13 to 35m, with **Pointe Ganoa** (23°08'S., 135°00'W.) bearing 300°, **Pointe Teonekura** (23°08'S., 134°58'W.) bearing 045°, and Monte Duff bearing 004°. Caution is advised as an isolated depth of 8.1m lies about 90m ENE of this anchorage, and depths of 4.3m lie within 0.1 mile of the position. Anchorage may be taken in depths of 27m with **Monte Mokoto** (23°07'S., 134°59'W.) bearing 010°, 1 mile distant; depths of less than 10m lie about 0.2 mile NNW of the position. Vessels also anchor with the chapel charted on Pointe Teonekura bearing 296°, 0.9 mile distant. The depth here is about 66m, but an isolated depth of 7.5m lies about 0.1 mile WSW of it.

Anchorage for vessels approaching via Passe du Sud-Est may be had 1.5 miles SE of Ile Aukena's SW end, in depths of 25 to 50m.

1.21 Port Rikitea (23°07'S., 134°58'W.) (*World Port Index* No. 55960), a small basin on the SE side of Mangareva, surrounded by shoals and reefs, lies close to the N shore off the N part of the village. The channel across the reefs from the outer anchorage to the inner anchorage is marked by beacons and range beacons, but is intricate and should not be attempted without local knowledge.

Commercial Wharf, lying furthest S, is 28m wide, with 2.5 to 4m of water alongside. Legion Quay, lying 1 mile N, is cement and 11m wide; the quay is without mooring bits with hawsers passed to trees ashore.

A channel, with a depth cleared by wire drag to 8m, is laid from 1 mile E of Rikitea to Totegegie, 5 miles NE; an airfield is situated on Totegegie. A wharf at Totegegie is restricted to vessels with a maximum length of 50m and a draft of 4.5m. An aero radiobeacon transmits during daytime only from Totegegie.

Anchorage.—Anchorage for vessels able to cross the reef extending from Ile Mangareva to Ile Aukena is available on the range line of two beacons shown from a position 0.15 mile N of the church at Rikitea, in line bearing 263°. Anchor in charted depths of 58m about 1 mile off the front range beacon. The bottom, sand and mud, has been reported to be good holding ground in E winds, but only fair in W winds. The inner anchorage is cramped.

Recif Bertero (22°02'S., 133°28'W.), whose existence is now considered doubtful, was reported in 1829. A shoal, covered by 18m of water, was reported (1978) by a British vessel 9 miles WSW of Recif Bertero. Soundings carried out in 2000 in this zone did not locate it; its existence is doubtful.

Recif de la Minerve (Ebrill) (22°40'S., 133°30'W.), which is reported to break heavily in a smooth sea, has a depth of 14m; a reef, awash, was reported to lie about 11 miles ENE of it.

Temoe (Timoe) (23°21'S., 134°29'W.) is 3.5 miles long and 2 miles wide. Its barrier reef has several islets planted with coconut palms.

Portland Reef (Bank) (23°40'S., 134°20'W.) has a least depth of 8.8m, sand and rock; the sea breaks heavily over the reef.

A depth of 9m is located 3 miles W of the W extremity of Portland Reef.

1.22 Morane (23°09'S., 137°07'W.) is a low-lying atoll about 3 miles in diameter, with no entrance to the lagoon. In 1985, it was reported that several huts and radio masts were visible on the NW side of the atoll.

Maria (22°01'S., 136°11'W.) is a small atoll covered with brushwood; the lagoon is inaccessible from the sea.

Marutea Sud (21°30'S., 135°30'W.) consists of a cluster of islets on a barrier reef, which is almost awash or only about 1m high. Some of the islets are cultivated.

Groupe Acteon (Actaeon) (21°23'S., 136°30'W.) consists of four atolls, from E-W, named Matureivavo, Tenaruga, Vahanga, and Tenararo. The islands are uninhabited, but are visited occasionally to harvest copra. The group is part of Iles Gambier administration.

Tides—Currents.—The current in the vicinity of Groupe Acteon usually sets W, but its direction is always influenced by the wind. With light W winds it has been found to set ENE at a rate of 7 miles in 24 hours.

Matureivavo (21°29'S., 136°24'W.), the largest atoll of the group, is about 4 miles long in a NNW-SSE direction. It is high enough to be visible from a considerable distance, and gives the appearance of a sandy beach, backed by a line of dark green. Some buildings lie on the NW side of the atoll.

In bad weather, the seas sometimes sweep over the reef. There is no entrance to the lagoon.

Tenaruga (Tenarunga), 9 miles NNW of Matureivavo, is a low, wooded atoll, whose lagoon is not accessible from the sea.

Vahanga, a small atoll 5 miles W of Tenaruga, is covered with coconut trees. There is a landing place on the NW side of the atoll, near a white house, but there is no access to the lagoon.

Tenararo (21°18'S., 136°44'W.) the smallest of the group, has a landing place on the NW side of the atoll between the small boulders, which encumber the reef. There is no entrance to the lagoon.

1.23 Fangataufa (Fangatafoa) (22°15'S., 138°45'W.) is a small, low, narrow, barrier reef.

There is access to the lagoon through a pass lying 0.5 mile SW of the N point of the atoll; the channel has a width of about 60m and a dredged depth of 6.5m. A 12m long quay, in 2.5m of water, is situated in the NE part of the lagoon; another quay, 50m long in 5m of water, and landing ramps, were constructed in its E part.

Aspect.—The access channel is marked, on each side, by two beacons. There is a disused airfield, built to accommodate medium size transport aircraft, on the NE coast of the atoll.

Caution.—It is reported that the pass of Fangataufa is obstructed by a chain boom. This boom can be moved by agreement with the local military authority.

Fangataufa is classified as a Common Military Zone. The zone includes the lagoon areas enclosed by the atoll and by baselines linking the closet points emerging from the reef on both sides of the channel. Entry is prohibited without authorization.

1.24 Mururoa (Mururura) (21°50'S., 138°55'W.) is an atoll about 15 miles long in an ENE-WSW direction and about 8 miles wide. The NW side of the atoll is low and the reef on that side is covered. The reef projects about 0.2 mile from the atoll on the E side and 0.1 mile on the W side.

Depths—Limitations.—The inner channel, with a least depth of 10.2m and a width of 100m, leads into the lagoon. The fairway is marked by buoys and lighted beacons. Currents in the entrance channel are generally variable, but usually set along the channel axis at rates of less than 1 knot.

Several channels lead to various berths throughout the atoll. A pier, with depths of 11m alongside, exists here, with a spur pier extending SE of it. This extension is about 150m in length, with alongside depths of 3 to 7m.

Aspect.—Large blockhouses stand on the atoll's N and SW points. Towers, with a height of 15 to 80m, moveable derricks, and other structures are visible at several points around the atoll. An airstrip lies on the NE portion of the group.

A light, with a racon, is shown from the center of the lagoon. **Pilotage.**—Pilotage is compulsory. Vessels should contact the local authorities to confirm their ETA via 2716 kHz when within 30 miles of the atoll. The pilot, who may be contacted on VHF channel 11, will board seaward of the entrance buoys.

Anchorage.—Vessels anchor in the E part of the lagoon, in varying depths from 20 to 30m, moderate holding ground. Winds from NW can raise a heavy sea.

Directions.—The entrance to the lagoon is on NW side of the atoll. Ilot Giroflee lies on the S side of the entrance. The

lagoon has an average depth of 37m; however, it is encumbered with dangerous coral patches.

The lagoon is entered with a lighted beacon (21°49.6'S., 138°52.8'W.) bearing 096.5°, situated at the center of the lagoon.

Caution.—It is reported that the pass of Mururoa, as well as the N and S approaches, are obstructed by a chain boom. This boom can be moved by agreement with the local military authority.

Mururoa is classified as a National Defense Protected Zone. The zone includes the lagoon areas enclosed by the atoll and by baselines linking the closet points emerging from the reef on both sides of the channel. Entry is prohibited without authorization.

1.25 Tematagi (Tematangi) (21°40'S., 140°37'W.) is the farthest W of the dependencies of Iles Gambier. The atoll is about 7 miles in extent. The sea breaks violently on some coral blocks on the NW side. Landing is fairly easy and safe a few hundred meters N of the SW point of the atoll; there is no pass into the lagoon.

A rocky spit, with a depth of 3m, extends about 1.5 miles SE from the SE extremity of the atoll.

Tureia (20°49'S., 138°32'W.) 7 miles long and 5.5 mile wide, is low and wooded except on the SE side; the lagoon is not accessible. Landing at the village on the N side is dangerous and requires the use of a surf boat.

Vanavana (20°47'S., 139°08'W.), a small atoll 1.5 miles in diameter, has thick and bushy vegetation growing on it. There is no entrance into the lagoon. The landing place, which can be reached only in a light swell, is at the W end of the atoll, close N of a gap in the coconut palms. A 4m high rock lying on the atoll may appear larger than its actual size due to a mirage effect.

Pinaki (19°24'S., 138°40'W.) is a small atoll, wooded with coconut palms; the land is not more than 2m high. Landing is possible near a village on the NW side. The atoll is populated only during the copra harvest.

Nukutavake is a small island, of coral formation, located about 8 miles NW of Pinaki. It is about 3 miles long in an E-W direction, and is wooded except at its E end. There is a radio station on the island.

In May, June, and July the population of this atoll moves to Vairaatea, and in August, to Pinaki to harvest copra.

1.26 Vairaatea (19°21'S., 139°13'W.) is comprised of islands joined by a barrier reef surrounding a lagoon.

The surf is heavy and landing is difficult; the usual place is near a shed with a flagstaff situated on the NW end of the atoll. There is a village on the atoll's NW.

Vahitahi is an atoll located about 29 miles N of Nukutavake. The lagoon is not accessible from the sea. The shores of Vahitahi are steep-to except the S part, which should not be approached within 0.3 mile. A village lies on the atoll's W end.

Akiaki (18°33'S., 139°13'W.), NW of Vahitahi, is a small island of coral formation. There is a landing on the NW side that is difficult.

Reao (18°31'S., 136°23'W.) is a narrow atoll, 12 miles long in a NW-SE direction, and about 2 miles wide. A large white

building on the W extremity of the atoll is conspicuous when seen from the SW.

The best landing is at the NW point near the village. When landing is not possible there, boats can land close S of the large white building.

Pukarua, 32 miles WNW of Reao, is about 10 miles long SE-NW. The NW side of the atoll is wooded and its S side presents a series of wooded clusters.

The lagoon is inaccessible from the sea, but landing can be effected on the shore N of the NW extremity, or on the W coast opposite the village. The coast is dangerous and should not be approached at night.

Tatakoto (17°20'S., 138°25'W.) is a low atoll about 90 miles NW of Pukarua that is wooded on the NW part. The lagoon is inaccessible from the sea, but a landing may be made near a flagstaff in a village on the atoll's W side.

1.27 Hao (18°15'S., 140°55'W.), an atoll about 31 miles long SE-NW and 8 miles wide, is located 145 miles WSW of Tatakoto. The reef has numerous islets, and vegetation grows on most of them, particularly on those on the E side. On the S and SW sides the reef is so low in places that the sea washes into the lagoon. Passe Kaki, the only entrance into the lagoon, lies on the N side of the atoll, with a former French military base close E of it. An airstrip stretches between the base and Otepa, the principal village.

Tides—Currents.—The spring range is about 0.6m. A local tide table published by the French authorities is available.

The rate of flow entering Passe Kaki can reach 3 knots at HW, when the water level in the lagoon is low. The outflow can exceed 12 knots, 6 hours after HW, when the water level in the lagoon is high. A S swell may lead to a phenomenon of water piling up in the lagoon, with resulting large and sudden changes in water levels of up to 1.8m. A tidal race and overfalls may extend up to 0.8 mile seaward of the channel entrance.

To avoid a difficult passage through the reef, vessels should wait for the two periods of slack water associated with the flood current, which are short. Slacks usually occur about 4.5 hours and 2 hours before moonrise; and again 5 hour and 3 hours before moonset. When the tidal race slows or stops, the channel may be entered.

Caution should be observed, as the information given above is for average conditions only. Current rates and the times or presence of slack waters may differ from those the vessel may experience.

Depths—Limitations.—Passe Kaki has a least depth of 6.4m on the range line. From the pass to the former military base, the channel was reported to have a least charted depth of 11m. The channel to the anchorage off Otepa has a swept depth of 7.4m.

A berthing facility with a least depth of 5.5m alongside, is available at the military base.

Aspect.—Two radio masts marked by obstruction lights stand 1.8 miles E of Passe Kaki. A group of hangars with an aircraft control tower lie about 0.5 mile further E.

Passe Kaki and the inner channels are marked by lights, beacons, buoys, and range beacons. Additionally, Passe Kaki is marked by a lighted range in line bearing 168°.

Pilotage.—Pilotage is compulsory.

Anchorage.—Off Otepa, anchorage is available, in a depth of 24m, sand. Anchor where a red lighted beacon is standing on an offshore shoal located about 0.4 mile W of the town bearing 090°, 0.3 mile distant.

Vessels waiting for a berth at the former military base anchor, in depths of 19 to 50m, between 0.6 mile and 1 mile E of a red beacon situated near the middle of the airstrip.

Caution.—Passe Kaki and the inner channels of this atoll all require local knowledge. The buoys, beacons, and lights marking the channels are reported to be unreliable.

1.28 Amanu (17°49'S., 140°46'W.) is an atoll located 10 miles NNE of Hao; it is wooded on all sides. There are two passes on the W side of the atoll which lead into the lagoon; they are 4.5 and 5.5 miles N of the S extremity.

Depths—Limitations.—The S pass has a width of 45m between the 5m lines. A spit, with a depth of 0.6m on its outer end, extends 0.1 mile S from the N side of the inner end of the pass. The pass 1 mile further NE is deeper but narrower and is not recommended.

Aspect.—A village, with a church which is not overly visible, lies on the W side of the lagoon. A conspicuous white tower stands on the coast to the W of the village.

Pilotage.—Pilotage is available and recommended as currents may reach 10 knots in the passes, causing violent eddies and overfalls.

Hao Paraoa (19°08'S., 140°41'W.) is wooded and its lagoon is inaccessible. The atoll is a dependency of Hao.

In passing to windward of the atoll, attention should be given to the current, which has been observed to set strongly toward it.

Ahunui is an uninhabited wooded atoll. The lagoon is inaccessible, but there is a landing place on the NW end of the atoll near some huts and a tank.

Manuhangi is a small atoll that lies 29 miles W of Paraoa. There is no entrance to the lagoon.

1.29 Negonego (18°45'S., 141°49'W.) is an atoll with clumps of trees on it, but its greater part is bare. A pass 1 mile E of the N extremity of the atoll leads into the lagoon. The pass into the lagoon was reported to be about 0.1 mile wide and had a depth of 2m; however, a coral patch, with a depth of 0.9m, is located in the middle of the passage. Vessels with local knowledge can anchor in the lagoon.

Iles du Duc de Gloucester (20°37'S., 143°17'W.) consists of three small atolls, similar in aspect, located about 136 miles SW of Negonego.

Nukutipipi, the E atoll of this group, is wooded on its E side; there is no entrance to the lagoon.

Anuanurunga lies 11 miles WNW of Nukutipipi. The reef on the W side is submerged, except for some coral heads.

Anuanuraro is located 14 miles NW of Atoll Anna Rug. The reef on the NW and SW sides extends seaward and is marked by heavy surf.

Hereheretue (19°54'S., 145°00'W.) lies about 82 miles WNW of the atoll of Anuanu Raro. There is no entrance to the lagoon, but there is a landing place a few hundred meters N of the W extremity of the atoll. Landing is dangerous with a W wind. The sea off the atoll is often heavy.

Fakahina (Fangahina) (16°00'S., 140°08'W.) is a wooded atoll that can be seen for a considerable distance. There is no

navigable passage into the lagoon, but landing can be affected in front of the village at the SW extremity of the atoll.

Fangatau (Angatau), about 38 miles WNW of Fakahina, is a wooded atoll, with no passage to the lagoon. A village with a church and a school is situated on the W extremity of the atoll.

1.30 Pukapuka (14°48'S., 138°50'W.) is a wooded atoll; the lagoon is connected to the sea by nonnavigable cuts in the S side of the reef. The lagoon has also been reported to be drying up. A wharf at the village on the atoll's W end provides berthing at HW to small vessels with local knowledge.

Iles du Desappointement (Disappointment Island) are located about 150 miles WNW of Pukapuka; they consist of an atoll and an island about 10 miles apart.

Napuka, the farthest SE, is an atoll which encloses a lagoon that is not accessible from the sea. The E and W sides of the atoll are wooded, but the S side is bare.

A white church with a red belfry, which is prominent from the N, dominates a village situated near the W extremity of the atoll. The atoll has a functional airstrip.

Tepoto (14°03'S., 141°25'W.) about 10 miles NW of Napuka, is about 18.3m high to the top of the trees; it is the NW island of the Iles du Desappointement. Landing is practicable, with assistance of the natives, on the W side of the island.

Ravahere (18°15'S., 142°10'W.) and Marokau are two low atolls that lie near each other. Each of the atolls is about 10 miles long; they are separated by a narrow channel that can be used by large vessels.

There is no entrance to the lagoon on Ravahere, but there is a landing, which is dangerous, on the SE side of the atoll.

Marokau, the farthest N of these two atolls, is wooded along its N side. Two islets stand on the S end of the reef on its E side, and there is a passage into the lagoon between them that is practicable for small vessels with local knowledge, in good weather.

Caution.—It was reported that two rocky patches about 0.2 mile apart, with depths of 9.1 to 11m, were seen 8 miles E of Ravahere.

1.31 Reitoru (17°50'S., 143°06'W.), a low atoll, has no entrance into the lagoon.

Haraiki, 30 miles NW of Reitoru, is somewhat higher than the usual atoll. A conspicuous white masonry water tower is situated on the N side of the atoll.

Hikuera, about 23 miles ENE of Reitoru, is partially wooded on the N side, but the E and SE sides are bare; the atoll is dangerous to approach at night. A village is situated on the atoll's W side. A landing may be made at a concrete wharf alongside a conspicuous shed at the village.

Tekokota (Tekokoto), about 14 miles N of Hikuera, is a circular atoll about 1 mile in diameter. Its N half is about 1.8 to 3.1m above water, but the S part is almost entirely submerged except for a wooded islet.

1.32 Tauere (17°21'S., 141°29'W.), a dependency of Amanu, is wooded on its N and E sides. The best landing place is on the reef on the W side of the atoll opposite the village.

Rekareka (Tehuata), a small atoll, lies 38 miles NW of Tauere. Shoal water extends 0.5 mile seaward from its N, W, and S sides, and about 0.8 mile SE from its SE extremity; on

the NE side the reef is not steep-to. The best landing is on the NW side near a village.

Marutea Nord (North Marutea) is a large atoll located 60 miles W of Tehuata.

Caution.—Caution is necessary in approaching this dangerous atoll. Its S and W sides are completely submerged and on the NE side there are only a few places where the reef is sufficiently above water to support a few small clumps of trees.

The best place for landing is on the last island on the NW side of the atoll, opposite a white masonry water tank.

Nihiru (16°43'S., 142°55'W.), an atoll about 17 miles NNE of Marutea, is wooded except at its S and SE extremities. The reef extends a considerable distance from the S and SE points of the atoll, and forms a distinct bight W of the latter point. There is no entrance into the lagoon, but there is a landing place in a bay on the W side of the atoll, opposite the village.

On meeting the N extremity of Nihiru, the current divides into two branches which rejoin off its SE extremity, where they form a strong eddy.

Between Nihiru and Marutea a current setting NE at 3 knots was observed. It has been reported that this current causes violent overfalls on the atoll's SE extremity.

1.33 Raroia (16°05'S., 142°25'W.) ([World Port Index No. 55940](#)), 30 miles NNE of Nihiru, is lightly wooded on its E side, but the N and W sides are covered with trees, especially in the vicinity of the pass and up to 3 miles S of it. A village, which is difficult to see from the offing, is situated on the W side of the lagoon, 2 miles S of the pass. The atoll was made famous as the site of the sinking of the raft "Kontiki" in 1947.

The lagoon is entered through the pass on the NW side of the island, which is divided into three channels by shoals. The N channel lies N of a reef covered by 2.9m of water. It offers a depth of 6.4m, a width of 20m between the reef and a shoal covered by 4.1m of water. The channel is marked by a lighted range bearing 090.7°. This passage can be used by vessels of less than 100m in length with local knowledge.

The middle channel is impracticable. Small vessels can use the S channel, which is a little more than 90m wide and has a least depth of 1.7m.

The outgoing current may exceed a rate of 8 knots, while slack water may be of short duration.

Large vessels anchor in the lagoon, in 27m, sand and shells, about 500m E of the village, with Tekanap reef bearing 270°, and Neketautau reef bearing 000°. There are many coral heads and reefs in addition to pearl farming in the approach to the anchorage.

Some of the coral reefs within the lagoon are marked by beacons. In general, after a vessel has cleared the pass, steer SW to pass W of the beacons, approaching the fringing reef to about 90m. Maintain this distance from the reef until the church is about 0.5 mile distant, then steer SSE to the anchorage.

Caution.—The passes and lagoons of Raroia are reputed to shelter a number of sharks, some of which belong to dangerous species.

1.34 Takume (15°48'S., 142°12'W.), an atoll, lies 5 miles NE of Raroia. It is wooded, except on its SE side, where the reef is broken in places and partly submerged.

A strong W current runs in the channel between Takume and Raroia, and during winds from between the NE and SE, a heavy sea is raised.

A village lies on the S islet of the atoll.

Taenga (16°21'S., 143°08'W.), 30 miles WSW of Raroia, is an atoll which is wooded on its N side and its E extremity, but its S part is largely awash. A 30m wide pass, close N of the village on the W side of the atoll, has a least depth of 1.5m and gives access to the lagoon. The centerline is marked by a range bearing 049°, the pass is divided into two branches; the one to the S, marked by a lighted buoy, leads to the village. The ebb current through the pass may reach 10 knots, however, the flood rarely exceeds 3 knots.

Makemo (16°32'S., 143°40'W.) is one of the most important and frequented atolls in Iles Tuamotu. The atoll is about 38 miles long in a NW and SE direction and is 4 to 9 miles wide. The N side is wooded, but the S side, generally above water level, is bare, and is very dangerous to approach at night.

Aspect.—There are two passes into the lagoon of Makemo that were reported to be marked by beacons with radar reflectors. Passe Arikitamiro, on the N side, about 12 miles W of the E extremity, leads SSE into the lagoon. The village of Pouheva is situated on the W side of the pass. Passe Tapuhiria is located on the NW extremity of the atoll. The village of Ohava is situated NE of the pass.

Passe Arikitamiro is easily identified by the break in the trees and by the remains of a disused lighthouse, a white house with a red roof. A white cement tank and a two storied school are also reported to be visible.

Passe Arikitamiro is about 0.1 mile wide and has a least depth of 9.5m. Within the entrance it is divided into three channels by two coral shoals. The middle channel should be used by larger vessels.

Passe Tapuhiria, on the W extremity of the island, has a width of about 90m and a depth of 7m; it should only be entered by vessels with local knowledge.

The ebb current is said to run out of these passes at a rate of 8 to 9 knots when the winds are between the S and SE. Under all conditions the currents are always strong; slack water is of short duration.

Anchorage.—Anchorage may be taken SW of Passe Arikitamiro, with Pouheva Light bearing 030°, distant 0.6 mile, in a depth of 15m. Anchorage is available 0.8 mile ESE and 0.6 mile S of Passe Tapuhira.

1.35 Tuanake (16°39'S., 144°13'W.) is the largest and farthest N of the three small atolls lie close together from 12 to 24 miles SW of Makem; it is wooded and a boat passage leads from the S side into the lagoon.

Hiti, lies 4.5 miles SE of Tuanake; the lagoon is inaccessible.

Tepoto lies 10 miles SW of Hiti; it is thickly wooded, and a stone landmark stands near the E extremity.

A patch, with a depth of less than 1.8m, was reported to lie 2.35 miles SW from Tepoto.

Motutunga (17°07'S., 144°22'W.), a low atoll, is located about 13 miles SSW of Tepoto. The S side is especially low, but on the N side there are a number of wooded islets on the reef. The atoll is about 7 miles in diameter and is only inhabited in certain seasons.

There is an inlet into the reef 1 mile ENE of the W extremity of the atoll, but it does not give access to the lagoon. The depth in the inlet was reported to be about 4.7m. There is a ruined landing-stage about halfway in the inlet where there is good shelter for small vessels. There are two masonry tanks on either side of the inlet. It is not possible to anchor around the atoll.

Tahanea (16°53'S., 145°47'W.) is about 25 miles long E-W and up to 9 miles wide. It is wooded along its N side, but is bare on its S and SE sides.

The lagoon is encumbered by coral heads, but there is deep water between them. Three passes lead into the lagoon from the NE side of the atoll. A green church is reported to be visible from the entrance of all three passes.

Passe Otaho, the farthest E of the three passes, is for small vessels with local knowledge.

Passe Teavatapu (Passe Manino), 1.5 miles W of Passe Otaho, is practicable for large vessels, but difficult for small craft. The pass is about 0.2 mile wide, with a depth of 13m; however, an 11m depth exists at the S end of the pass. There is a reef 0.6 mile S of the S extremity of the island that forms the W shore of Passe Teavatapu.

There is anchorage W of the island; good anchorage can also be obtained 1.5 miles E of the visible reef located 0.6 mile SSW of Passe Teavatapu.

Passe Motu Puapua, 1 mile NW of Passe Teavatapu, is dangerous.

1.36 Anaa (17°25'S., 145°29'W.) is heavily wooded. There are five villages on the atoll; Tukuhora, the principal village, is situated on the NE side. A quay approachable by reef whalers is constructed on the side of a cavity in the coral reef in front of the town. Approach is impossible in winds from the E because of breakers which are produced on the quay. A mooring buoy, whose use is reserved for schooners supplying the atoll, is anchored 150m off the quay. There is no passage into the lagoon.

The clouds above the atoll reflect the lagoon in the form of a pale green projection in certain weather conditions which can be seen at a great distance.

Faaite (16°45'S., 145°15'W.) is a partly-wooded atoll. The S reef is low and dangerous to approach at night. There are buildings and a flagstaff near the pass that are conspicuous.

There is a pass through the barrier reef into the lagoon that is entered from the NW extremity of the atoll. It extends SE from the entrance, which is about 50m wide, with a least depth of 3.5m. It has been reported that the buoyed fairway to the pier W of the flagstaff, has a depth of 7.5m. The pier has alongside depths of 3m.

Tides—Currents.—Currents in the pass ebb at a rate of 6 knots and flood at a rate of 4 knots; slack water is of short duration.

Anchorage.—Anchorage may be had outside the pass with the flagstaff bearing 066°, about 0.4 mile distant. Anchorage is possible within the pass, but the currents may prove difficult.

1.37 Fakarava (16°18'S., 145°35'W.) is about 31 miles long NW and SE and about 14 miles wide; it is almost rectangular in shape.

Aspect.—On the SW side of the atoll the reef is low-lying, and has some small islets on it; they stand about 1 mile from the outer edge of the reef. Only two or three of the islets can be seen simultaneously. The N and E coasts are wooded.

There are several landmarks in Rotoava that are visible from seaward, including an unfinished light structure which has been abandoned. A conspicuous gray tower stands 0.3 mile N of Rotoava. A marker lighthouse 30m high, was erected 1.5 miles NE of Garuae Pass.

Anchorage.—Large vessels anchor, in depths of 20 to 25m, with the flagstaff bearing 055° and about 0.7 mile distant. Small vessels anchor about 0.4 mile W of the flagstaff. Both anchorages offer good holding ground, sand and coral, with shelter from winds of WSW through N to SSE. Winds of the SSE to WSW may raise a heavy swell here.

Directions.—Two passes that may be used lead into the lagoon of Fakarava.

Passe Tuamakohua is suitable for vessels drawing less than 2.6m and requires local knowledge. The pass intersects the atoll on the SE.

Passe Garuae is entered 6 miles WSW of the N extremity of Fakarava. The pass is about 0.9 mile wide and it has been swept to a depth of 10m, over a width of 0.2 mile. Recife Pufana, marked by a lighted beacon, is located 0.9 mile ESE of the E entrance point of the pass.

Vessels can enter the pass on a course of 147°. When the lighted beacon on Recife Pufana bears less than 070°, steer with the flagstaff at Rotoava ahead bearing 067°. When about 2 miles from the village steer as necessary to the anchorage. The channel is marked by buoys and beacons, which have been reported to be unreliable.

The outgoing tidal current follows the axis of the pass and is sometimes strong; a line of breakers appears to extend across the entrance; however, a vessel with a speed of over 8 knots can enter at anytime.

1.38 Katiu (16°25'S., 144°21'W.) is a low atoll. Its entire NE side is wooded, the SW is barren.

Pakata Pass on the NE side of the atoll offers an entrance to the lagoon, but has a width of about 30m and a least depth of 3.3m. A set of range lights bearing 193.5° mark the pass. This pass is practicable only for small vessels with local knowledge.

The other pass lies close S of the W extremity of Katiu, it is small and practicable only for boats.

Raraka (16°10'S., 144°54'W.), 23 miles NW of Katiu is wooded on its N side, but the S side is bare, except at its S extremity. There is a pass into the lagoon which should only be used by vessels under 300 grt with local knowledge. The passage is about 45m wide with a depth of 5m, and is marked by a set of range beacons in line bearing 163.4°.

Anchorage.—Anchorage is available with a flagpole situated in the village on the N side of the atoll bearing 295°, about 0.3 mile distant, in a depth of 15m. The current sets out of this pass, sometimes attaining a velocity of 6 or 7 knots with an E wind.

Kauehi (15°54'S., 145°09'W.) is wooded except for about 4 miles on its S side. A remarkable islet, marked by a beacon, lies on the E side of the lagoon.

Passe Arikitamiro, on the SW side, gives access to the lagoon. The channel is about 200m wide and has a depth of 11m; the north side is marked by a lighted beacon. Local knowledge is necessary for safe passage.

Tides—Currents.—A strong tidal current sets through the pass; eddies caused by the outgoing current are encountered up to 0.3 mile outside the entrance. Overfalls are caused by tidal currents at the outer and inner ends of the pass, depending on direction of flow.

Anchorage.—Anchorage can be obtained about 0.6 mile WSW of the head of the wharf at the village, in a depth of 16m, sand and coral; there is swinging room of about 0.3 mile.

Directions.—Vessels enter Passe Arikitamiro on course 045°; once the transit of the pass is completed, steer 024° for the village situated on the NE side of the lagoon, about 8 miles distant. A coral patch marked by a beacon, 1.2 miles distant bearing 306° from the conspicuous islet, should be passed on its E side.

Taiaro (15°45'S., 144°38'W.) is about 14m high to the tops of the trees; there is no pass into the lagoon. The best landing place is on the W side near some native huts.

1.39 Aratika (15°27'S., 145°30'W.), an atoll about 8 miles in diameter, is wooded on the N side, with a low, dangerous reef everywhere else. It lies 22 miles to the NW of Kauehi. A prominent village is situated near the E extremity.

Two passes lead into the lagoon, but are only suitable for small boats; they are subject to currents of up to 6 knots. Tamaketa Pass on the W side, whose bed is covered by 2.4m of water, is the only usable one. It is not possible to anchor around the atoll. Fainukea Pass, to the E, is frequently subject to heavy rollers, which can make its use impracticable, particularly when there are strong E winds. This pass is narrow and winding, and should not be used without the assistance of an experienced local pilot. The pass provides access to the village of Paparara, which is readily visible from a distance.

An airfield with a small control tower is situated NW-SE on the atoll and is more than 600m long. There is an infirmary and telephone service.

Toau (15°55'S., 146°02'W.) is about 20 miles long in a SE-NW direction, and about 10 miles wide. The NW and NE sides are wooded, but the SE and SW sides are bare and dangerous.

There are two passes into the lagoon on the E side. Passe Otungi (Passe Otugi), about 3.5 miles N of the atoll's E extremity, is 350m wide and has a depth of 6m. The current in the pass is strong and causes eddies up to 2 miles outside the entrance. The best anchorage in the lagoon is about 1 mile S of the pass, about 0.2 mile W of a masonry tank, partially covered by vegetation, in a depth of 14m.

Passe Nepo (Passe Fakatahuna), 1 mile NW of Passe Otungi, is about 150m wide, but is only practicable for small vessels with local knowledge and should be entered at slack water.

Anse Amyot is a small inlet in the reef on the NW side of Toau that provides shelter for small vessels.

1.40 Niau (16°09'S., 146°22'W.) lies 17 miles SW of Toau. This circular island, 5 miles in diameter and 8m high, is covered with forest, and visible from a distance of 12 miles.

The population was 160 in 1996. The town of Tupani, to the NE of the island, is well visible from sea and has an open basin where craft can approach even in moderate wind from the E. Another landing point is located to the NW of the island, on a sandy beach in front of the abandoned town of Ofare.

Vessels can anchor, in E winds, in 25m, in front of the village, and 100m from the reef.

There is a radio station at the town of Tupana.

The current in the vicinity of Niau is strong, sometimes setting W and E.

Kaukura, about 15 miles W of Toau, is 25 miles long in an ESE-WNW direction. The N side is wooded, but the S side only has two clumps of trees. Large blocks of coral, some 9m high and visible 12 miles, are located on the S side of the atoll.

Passe Moturaa, near the middle of the N side of the atoll, will accommodate vessels with a draft of less than 1.5m. Motu Panao, on the NW side of the atoll, is practicable only for boats.

Tides—Currents.—The tidal currents in the pass and the boat passage are strong; they set E on the flood current and W on the ebb current.

1.41 Apataki (15°27'S., 146°20'W.) is wooded, except on its S side, where the reef is submerged and is dangerous to approach at night; in calm weather the S side is dangerous even by day, as there are no breakers and the current is always strong.

There are two passes into the lagoon of Apataki. Passe Pakaka lies 6 miles NW of the S extremity of the atoll; Passe Tehere is located on the NW extremity, 14 miles N of Passe Pakaka.

It was reported that beacons marked coral patches on either side of a straight line drawn between Passe Tehere and Passe Pakaka.

Tides—Currents.—Passe Pakaka has currents, in the outer part of the pass, that set simultaneously in opposite directions; the N side is the normal tidal current with a minimum rate of 4 knots. The current on the S side is a countercurrent, and both change their direction at HW and LW.

Inside the pass, the strength of the outgoing current is increased by the narrowing channel, and sometimes attains a rate of 5 or 6 knots; the incoming current may reach a rate of 3 knots. Slack water occurs about the time of the noon meridian passage.

Passe Tehere has ebb currents of 3 knots that set along the axis of the channel. The rate of the flood tide may vary from 2 to 5 knots. The pass is about 0.2 mile wide and deep, but shoal spits at either end reduce the width of the fairway to 130m. There is a depth of 5.8m over the bar.

Depths—Limitations.—A concrete wharf lies on the S side of the pass, about 0.2 mile NE of the seaward entrance. The wharf offers three berths, the deepest of which offers 3 to 5m of water alongside a 10m wide berthing stage which projects outward from the main wharf. The rest of the wharf has less water alongside.

Anchorage.—Once within the lagoon and clear of the fringing reef, a course of 070° will lead to an anchorage about 1.5 miles from the pass.

Anchorage is available, in a depth of 26m, coral. The charted channel leads about 55m N of a reef with a depth of 0.5m.

1.42 Arutua (15°18'S., 146°45'W.), 9 miles W of Apataki, is wooded on the N side, but the S part is bare and a large part of the reef is submerged. There is an airstrip at the N end of the atoll.

Passe Porofai, near the SE extremity, gives access to the lagoon for small vessels; however, it is difficult even with local knowledge.

Tikei (14°58'S., 144°33'W.) is a small island about 60 miles NE of Aratika. The only landing place is at a small village on the W extremity of the island, and it is difficult.

Iles du Roi Georges, consisting of two atolls, Takapoto and Takaroa, lie about 37 miles NW of Tikei.

Takapoto (14°39'S., 145°12'W.) is about 10 miles long in a NE-SW direction; it is wooded.

There is no entrance to the lagoon, but boats can land at Fakatopatere, a village close W of the atoll's S extremity. In good weather, small vessels make fast to a reef about 2 miles N of Fakatopatere. A disused light is visible on the W end of the atoll.

1.43 Takaroa (14°27'S., 144°57'W.) ([World Port Index No. 55930](#)) is wooded in clumps on all sides. This atoll is 15 miles long in a NE-SW direction and is up to 3.8 miles wide. There is a pass near the SW extremity that provides access to the lagoon. There are numerous pearl farms in the lagoon.

Passe Teauonae is about 1 mile long on an E-W axis.

Tides—Currents.—Currents in the pass have a rate of 5 or 6 knots, but with a heavy swell from between the S and SW; there is a continuous outgoing current which sometimes reaches a rate of 9 knots.

Depths—Limitations.—The pass is about 55m wide at its seaward end, and has a least depth of 12m charted in the center of the channel, but gets shallow as it approaches the narrow lagoon entrance. The channel shows a least charted depth of 3m, is reef fringed, and requires local knowledge E of the wharf. A wharf on the N side of the pass, at the village, has an alongside depth of 3 to 4m.

Aspect.—The church spire at the village of Teavaroa is prominent. Wrecks lie on the beach, 2 and 4 miles NE of the pass. There is a weather station, an aviation runway 1,200m long and 30m wide, and a telephone on the island.

Pilotage.—Although there are no official pilots for Passe Teavaroa, fishermen with outboard motorboats will sometimes lead ships in.

Anchorage.—A good temporary anchorage can be taken outside the pass near the N reef, in 16 to 18m.

1.44 Manihi (14°25'S., 145°57'W.) ([World Port Index No. 55920](#)) is a wooded atoll 15 miles long in an ENE-WSW direction. A village stands on the E side of Passe Tairapa in the SW part of the atoll.

Tides—Currents.—Currents in the pass normally attain a maximum velocity of 7 knots.

Depths—Limitations.—Passe Tairapa, about 60m wide and marked by beacons, is safe and deep, except at its poorly defined inner end, where it shoals, leaving a navigable channel about 40m wide, with depths of 3m. The W side of the channel is deepest and local knowledge is recommended. The concrete quay, on the E side of the channel has alongside depths of 0.6m; however, depths off the wharf are reported to increase rapidly to about 4m. Several submerged rocks protrude from the face of the quay.

Ahe (14°30'S., 146°19'W.) is about 13 miles long, 5 miles wide, and is wooded. A village is situated on the SE side of the lagoon, accessible via a channel leading across the lagoon from it to a pass on the NW side of the atoll. The pass and channel require local knowledge. A conspicuous house painted violet or purple, and a house with a conspicuous white gable are reported to lie NW of the village. The pass into the lagoon is reportedly accessible by vessels with a draft of less than 4m, but depths of 1.8m are charted on the reef obstructing the inner end of this channel. Small vessels Med-moor to a long wharf situated at the village; the wharf offers depths of 2 to 4m alongside. It has been reported that the tidal currents in the pass are strong, but are negotiable at slack water. In 2001, it was reported that pearl farms lie on the E shore of the lagoon.

Caution.—It was reported that a strong SW set is experienced when approaching Manihi and Ahe, increasing as the atolls draw nearer. Caution should be exercised by vessels planning an early morning ETA at these atolls, as several vessels attempting this have been lost on the reefs here when the current brought them to the atolls before daybreak, ahead of their ETAs.

1.45 Rangiroa (15°08'S., 147°35'W.) ([World Port Index No. 55910](#)) is the largest atoll in Iles Tuamotu. It is about 44 miles long in an ESE-WNW direction and about 17 miles wide; it is wooded throughout.

Tides—Currents.—In both the passes tidal currents attain rates of 3 to 6 knots, which cause strong rips or eddies known as "opape." During the flood, these eddies are found at the inner part of the pass; during the ebb they are found near the outer part. Small vessels with auxiliary engines should wait for slack water to transit these passes.

Depths—Limitations.—Passe Avatoru, about 0.2 mile wide, has a least charted depth of 14m on the range until the turn into the lagoon, then, shoal water makes it dangerous for vessels drawing more than 2.8m to proceed further in. A set of range lights, in line bearing 172°, marks the channel through the pass. A wharf, about 20m in length, with alongside depths of 9m, lies on the E side of the pass. A second wharf, with an alongside depth of 4.5m, lies on the lagoon side of the village, 0.2 mile ESE of the church.

Passe Tiputa has a least reported depth of 8.7m on the range line. A quay, about 40m in length, is available on the SE side of the pass. Pilings off the quay's face offer the deepest berth, with a length of 17m, and an alongside depth of 6m; elsewhere, the quay has depths of 2.9m.

There is another quay on the W side of Passe de Tiputa, situated at the SW extremity of Ile Reporepo. The quay has depths of 3.5 to 4.6m alongside. A shoal, with a depth of 2.7m, lies about 45m NW of the quay. At its inner end, the pass is divided by a bare flat-topped islet that stands on a reef. This

reef extends 0.3 mile S from the S extremity of the islet. The channel N of the islet is encumbered with reefs and is dangerous. The lagoon is safe, and vessels can proceed from Tiputa to Avatoru without difficulty, but the SE trades may raise a sea.

Aspect.—An airfield with a control tower is situated on the N side of the atoll, but the antenna of an aeronautical radiobeacon has been reported to be obscured by trees. Two villages on the S side of the atoll possess churches, while a conspicuous wreck is charted on the SW side of the atoll. The wreck has been reported to be no longer visible.

Two passes lead into the lagoon. Passe Avatoru enters the lagoon 7 miles E of the atolls N extremity; Passe Tiputa lies 5.5 miles farther E. The villages of Avatoru and Tiputa lie on the E side of each pass. A church is situated in each village, but they are not conspicuous from seaward. In 1989, it was reported that there is a lighthouse at Motu Maherehona, the NW extremity of the atoll.

Anchorage.—Vessels can anchor in Passe Avatoru on the range line, in a depth of 30m, about 0.2 mile N of the island dividing the pass in two. The holding ground is good, but the anchorage should not be used in N winds. Anchorage is available off Tiputa, in a depth of 17m, with the church bearing 048°, 0.3 mile distant, but the holding ground is indifferent in E winds. Anchorage is prohibited in Passe Tiputa as submarine cables cross the channel.

Caution.—Extreme caution should be used when navigating in the vicinity of the S extremity of Rangiroa. A strong current, called the "ati ati," sets vessels toward the N. The reef is only awash in places and is difficult to see.

1.46 Tikehau (15°00'S., 148°10'W.) consists of a chain of wooded islets standing on a nearly circular reef.

Tides—Currents.—Passe Tuheiava, at the W extremity of the atoll, has strong outgoing tidal currents which makes entry difficult.

Depths—Limitations.—The fairway between the reefs is about 90m wide and has depths of 3.7 to 11m; it gives access to the lagoon for vessels with a draft of no more than 3.7m, with local knowledge.

At the E end of the village of Tuherahera there is a pier, with depths of 3 to 5m on the E side of its head.

The IALA system of buoyage is in use to mark the passes and interior channels of the island. The general direction is counterclockwise around the islands.

Mataiva (14°53'S., 148°40'W.), 21 miles WNW of Tikehau, is the farthest W of the Iles Tuamotu. It is about 5 miles long E-W, and 3 miles wide. A break in the palm trees on the NW extremity marks the boat passage through the reef. An obelisk stands on the S side of the boat passage.

Fishing nets may be spread across the passage. There is a small jetty on the S side, seaward of the bridge.

Makatea (15°50'S., 148°15'W.) is an island about 4 miles in extent in a NW-SE direction. The highest point of the island, 110m high, is near its N extremity. The island can be seen at 20 miles. Cliffs border the island and at the foot there is a narrow strip of low ground which is covered with coconut trees.

Tides—Currents.—Currents in the vicinity of Makatea set W, when the Southeast Trades blow steadily, at a rate of 0.5 to 2 knots, except at Moumu Bay on the E coast, where it follows

the shore in a NW direction. Off Port Temao an indraft is felt. During W winds, the direction of the current is often completely reversed with a rate of 1 to 1.5 knots.

Aspect.—Port Temao on the W coast was the site of mining and loading operations for phosphates. In 1971, the phosphate workings were abandoned and the port installations were no longer maintained.

Iles de la Societe

1.47 Iles de La Societe are divided into two groups for administrative purposes and are known as Iles du Vent (Windward Islands) and Iles Sous le Vent (Leeward Islands). Iles du Vent is composed of Meetia, Tahiti, Moorea, Tetiaroa, and Maiao. Iles Sous le Vent consists of Huahine, Raiatea, Tahaa, Bora-Bora, Atoll Tupai, Maupiti, Atoll Maupihaa, Atoll Manuae, and Atoll Motu One.

All of these islands, except Tetiaroa and those at the W end of the group, consist of high volcanic mountains surrounded by coral barrier reefs.

Currents in the vicinity of Iles de la Societe have no constant set. Except in their coastal waters, the current follows the direction of the wind. Easterly winds are the most frequent; consequently, W currents predominate; its rate depends upon the strength of the wind.

Regulations.—A continuous watch on VHF channel 6 is required in the territorial waters of these islands.

Meetia (Mehetia) (17°52'S., 148°04'W.) is the farthest E of Iles de la Societe. The island is 435m high and has a diameter of 1 mile. The N side is remarkably steep, but on the S side the slope is more gradual.

There are two prominent rocks near the E extremity of the island; a reef, which has no passage through it, extends about 1.5 miles E of the rocks.

In clear weather, Meetia may be seen for 60 miles.

Caution.—Breakers have been reported about 1 mile off the island's SW point, but their existence is doubtful.

Tahiti

1.48 Tahiti (17°41'S., 149°22'W.) is the most important of Iles de la Societe; it is 33 miles long NW-SE and is 15 miles wide. The island is formed by two ranges of high mountainous land, which are connected by the low narrow Isthme de Taravao (Isthmus Taravao), rising to a considerable height in each part from a low, and generally narrow margin of coast. Of these two parts the NW and larger is called Tahiti, and the SE, Presqu'île de Taiarapu (Taiarapu Peninsula). Mont Orohena in the N part is 2,240m high, and Roniu, 1,323m high, is on Presqu'île de Taiarapu.

The mountains are frequently enveloped in clouds, so caution is necessary when making land at night. If coming from the N or E the light on Pointe Venus (Venus Point) should be sighted before closing the coast.

A barrier reef surrounds the island at a distance of 1 to 2 miles. Within this reef there are several good harbors, the principal ones are Papeete on the NW coast, and Port Phaeton on the SW side of Isthme de Taravao.

Winds—Weather.—The trade wind blows from the SE between May and September; between September and December

it is more frequently from the E, and from January to April it is from between the NE and NW. The winds are modified by the high mountains of the island and by the action of land and sea breezes. Along the shore the prevailing wind is from the ENE to ESE.

If the wind is from the ESE it divides on striking Presqu'île de Taiarapu; the S portion blows along the S coast of Tahiti as far as Pointe Maraa, when it turns from the coast and blows toward the S point of Moorea. The N portion blows along the N coast as far as Pointe Venus, where it becomes a E wind. There it leaves the coast and blows toward the N point of Moorea.

Between Pointes Maraa and Venus there are generally calms and local breezes which extend for a short distance into the channel between Tahiti and Moorea. The dividing line between the winds to seaward and the calm is very clearly marked.

Should the wind be from the E or ENE it strikes the N coast of Presqu'île de Taiarapu, and the SW coast as far as Passe de Teputo becomes becalmed, while a breeze crossing the Isthme de Taravao blows from the E along the S coast of Tahiti as far as Pointe Maraa. There it turns away from the coast and leaves a calm between Pointe Maraa and Pointe Faaa.

In proportion, as the wind shifts to the E and ENE the line of demarcation between the breeze and calm, which begins at Pointe Venus, approaches the land again and blows along the coast to Pointe Fare Ute, where it turns toward the reef off Pointe Faaa, leaving the roadstead at Papeete calm.

At Papeete, land and sea breezes usually prevail, the former commencing about 2000 and lasting until 0700; the sea breeze generally sets in about 1100, blowing from NW, and subsides about 1700.

Tides—Currents.—Along the N coast of Tahiti the general set of the current is to the NW, and on the S coast to the SE. With W winds the current is often reversed. In good weather the velocity of the current is about 1 knot, but with strong winds it sometimes attains a velocity of 3 knots. Off Presqu'île de Taiarapu, with N winds, the set of the current is SE.

1.49 Pointe Venus (Venus Point) (17°29'S., 149°29'W.) is the N extremity of the island. It is a long, low point extending about 1 mile to the N from the foot of the mountains. The point is marked by a light.

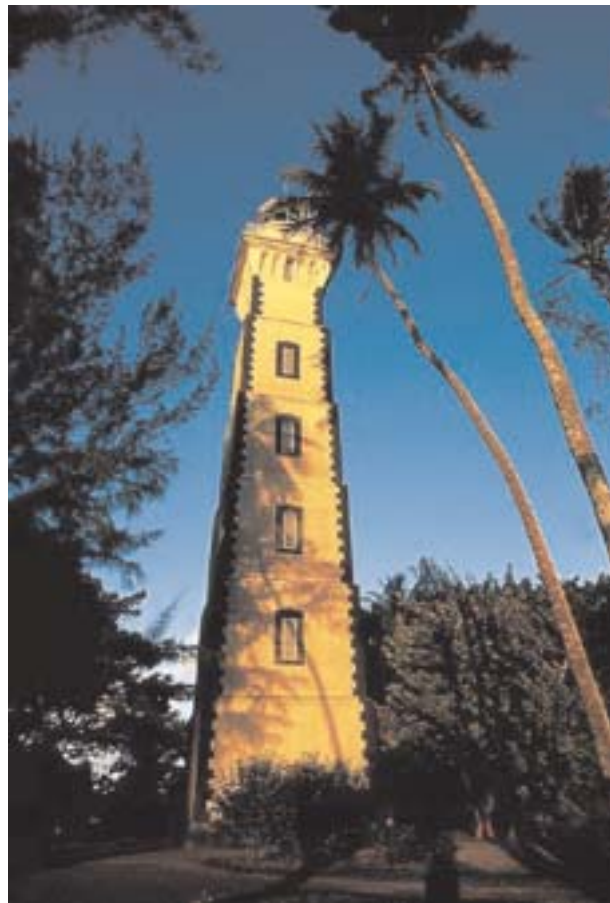
A reef, awash, extends in an arc N, E, and W of the point, about 0.5 mile from the beach, and there are probably shoal heads a short distance seaward of the line of breakers.

From Pointe Venus the coast trends 8 miles SW to Pointe Tataa (Tatuu Point), which lies close S of Point Faaa, the NW extremity of the island. The fringing reef lies up to 0.9 mile off this coast and the 100m curve lies from 0.2 to 1 mile offshore.

Baie de Matavai (Matavai Bay), lying between Pointe Venus and Pointe Outuhaihai (Utuhaihai Point), 2.5 miles SW, recedes about 0.5 mile and is fronted by shoals; it is divided by Mont Tahara, a rocky hill bordered by cliffs.

Banc du Dolphin, with a depth of 3.9m, lies 0.4 mile SW of Pointe Venus. There is a channel about 0.1 mile wide, with a least depth of 6.6m, NE of the bank.

La Chaîne du Toatea (Toatea Reef) are a chain of shoals which extend 1 mile SW from a position 0.2 mile SW of Banc du Dolphin. The depths over the shoals are irregular, and on some of the coral heads there is only 5m. Several narrow channels lead through the reefs. With a heavy swell from sea-



Courtesy of Dr. Giles

Pointe Venus

ward there are breakers on these reefs as well as on Le Mahoti, a reef with a least depth of 1.6m located 0.3 mile W of Mont Tahara.

In Baie de Matavai, anchorage may be obtained anywhere, but the best anchorage is with the lighthouse on Pointe Venus bearing 043°, 0.4 mile distant, in a depth of 20m, sand.

From Pointe Outuhaihai to Pointe Fare Ute, about 2.8 miles WSW, the coast is low, the foot of the mountains receding some little distance inland.

1.50 Pointe Ariti (17°31'S., 149°33'W.) is located 1 mile W of Pointe Outuhaihai. The coast recedes about 0.3 mile between these two points and forms a bay that is obstructed by banks of coral which have winding channels between them.

Pointe Ariti is fronted by a drying coral reef which extends about 0.2 to 0.3 mile offshore.

Passe de Taunua, 0.2 mile wide between the 20m lines, has a least charted depth of 25m. The pass, 0.5 mile WNW of Pointe Ariti, is entered on a range of two beacons in line bearing 174°. Within Taunua Bay anchorage, in 25m, sand, can be taken E of the range, with Pointe Ariti bearing 078°, 0.3 mile distant. This anchorage is protected from E winds; with strong NW winds it becomes dangerous as a heavy swell rolls in through the pass.

Chenal Taunoa connects Taunoa with Port de Papeete. It is about 1.5 miles long and tortuous; though marked by beacons, both lit and unlit, it should only be used with local knowledge. Vessels drawing up to 5.8m can use the channel with safety, but must be able to pass under a fixed bridge with a vertical clearance of 4.4m at the W end of the channel. Approaching through this channel, on the NW side, there is a berth 0.1 mile off the bridge for gas tankers of up to 85m long, 13.8m wide, and drawing 6m.

Port de Papeete (17°32'S., 149°35'W.)

World Port Index No. 55840

1.51 Port de Papeete, the most important and best-sheltered harbor in Tahiti, lies between the barrier reef and the coast on the NW side of the island. It consists of a small natural harbor and the town of Papeete.

Winds—Weather.—Rain squalls seen in the direction of Pointe Venus or a little S of it usually reach the harbor, but those collecting over Mont Aorai in the interior seldom descend to the harbor. The port is safe in all weather except typhoons. There are long periods of calm accompanied by rather high temperatures. November through March is usually considered to be the rainy season. At this time, strong gusts of wind from the N to NW are likely to occur.

Tides—Currents.—In this harbor, HW occurs twice each day, between 1200 and 1400, and between 0000 and 0200. This appears to be peculiar to this locality, and is apparently caused by the water thrown over the barrier reef by the sea breeze. The tidal rise is about 0.3m.

Off the entrance to Port de Papeete, the current generally sets W at about 1 knot.

The current running through the pass is dependent upon the volume of water contained within the barrier reef, which is independent of tidal rise and drop. The volume of water contained within is determined by the amount of rainfall on the hills behind the port, on the amount of water flowing from Chenal Taunoa or Chenal de Faaa, and the amount of water driven over the reef by the wind. The result is a constant set between the WNW and NW. During bad weather, particularly when the wind is between the WNW and NW and drives the sea over the reef, a W cross channel set with rates of 5 knots may be experienced. This current creates a heavy sea in the channel entrance, making it dangerous. Vessels should not attempt the pass at these times.

Depths—Limitations.—Passe de Papeete, 110m wide, has a swept depth of 10.9m on the range line, with general depths of 10 to 45m within the reef. Several shoal patches, some of which are buoyed, lie on the NE and SW sides of the harbor, which may best be seen on the appropriate chart.

Quai de Petrolier is positioned at the end of a 0.2 mile long causeway and lies about 0.3 mile SE of the channel entrance. This tanker terminal provides berthage for vessels up to 675m in length, with a draft of 10m. Quai au Long-Coeurs, 0.2 mile E of Quai de Petrolier, is about 450m in length, offering three berths to vessels loading coconut oil. The NE end of the wharf has an alongside depth of 9m, while the SE portion has a depth of 10.5m. Quai de Cabotage, about 0.3 mile NE of Quai au Long-Coeurs, offers a length of 290m and alongside depths of

6m to vessels discharging bulk grain or copra. Quai aux Petroliers, another tanker berth, situated 0.5 mile NE of Quai de Petrolier, offers depths of 10m to vessels up to 275m in length berthing alongside. Quai des Paquebots, the cruise ship wharf, lies 0.3 mile SE of Quai aux Petroliers and has a length of 232m, with alongside depths of 9m.

Several small craft fishing and coastal berths are spread out around the harbor, with alongside depths of 0.5 to 3m. A naval installation, complete with floating drydock, lies in the NE portion of the harbor.

The maximum size vessel permitted to berth alongside is 250m long and drawing 10.3m. However, the longest vessel to berth is the liner Queen Elizabeth II, with a length of 294m; the deepest tanker drew 11.3m.

A vessel with a maximum length of 170m can anchor in Rade de Papeete.

Aspect.—The deep gorge of the River Faatetai is easily identified 5.5 miles SSE of the harbor. The gorge lies between **Mont Aorai** (17°36'S., 149°29'W.), 2,066m high, and **Pic Mamanu**, 912m high, which lies 3.5 miles S of the harbor and stands prominent between Mont Marau and the W coast of Tahiti.

Silver-painted oil storage tanks situated near **Pointe Fare Ute** (17°32.1'S., 149°34.3'W.) are a good landmark. A conspicuous radio tower painted red and white stands near Fare Ute.

Pilotage.—Pilotage is compulsory and must be arranged at least 24 hours in advance, confirming vessel's ETA 1 hour prior to arrival. The pilot boards about 2 miles NW of the harbor entrance. Pilot for the roadstead or for anchorages of Tahiti and Moorea must be requested 24 hours in advance at Papeete.

Regulations.—Restricted areas into which entry is prohibited have been established at both ends of Papeete Airport runway (17°33.5'S., 149°36.5'W.). Outer zones that enclose these areas have also been established in which the following regulations apply:

1. Navigation in Passe de Papeete is restricted for vessels with a height of more than 20m. In order to proceed through the pass, permission must be requested from the lookout station of the Papeete Autonomous Port.

2. By day, vessels with a height of more than 6m must seek prior permission from the lookout station of the Papeete Autonomous Port before navigating in Chenal de Faaa and in close proximity to the ends of the airport runway. By night, passage in this area is prohibited to all vessels.

Signals.—The post office and the pilot may be contacted on VHF channel 12. Vessels are required to maintain a listening watch on VHF channel 6 while within the waters of Iles de la Societe.

Anchorage.—Anchorage for vessels 170m in length or less is available in any portion of the harbor, at least 0.1 mile offshore, over a bottom of mud, sand, and shells.

Vessels awaiting pratique usually anchor with the inner range lights in line, and the front entrance range light structure bearing 140°, in a depth of 31m. Vessels waiting for a berth anchor further E, in depths of 18 to 20m.

Directions.—From seaward, the fairway is marked by a set of range lights in line bearing 148.5° leading through Passe de Papeete. A second set leads through Rade de Papeete to the E side of the harbor in line bearing 087.5°. If proceeding to berth

alongside or to a waiting anchorage, gradually steer E when the tanker terminal is on the port-beam, situated about 0.4 mile SE of the entrance. The first set of range lights lead between Recif Soatai and another reef 0.3 mile NE to a quarantine anchorage.

Fresh ENE winds generally prevail during the day and cause drift, and the cross current in the channel causes set. A large vessel should enter at dawn when the trade wind is usually light.

Caution.—The current that sets out of Passe de Papeete attains a velocity of 4 to 5 knots, and at times varying in direction between the N and W. Local magnetic anomalies exist within the harbor.

1.52 From Passe de Papeete the barrier reef trends WSW about 2.8 miles, from 0.5 to 1 mile from shore, and then turns sharply to the S for 3 miles to Passe de Taapuna.

Pointe Punaauia (Punaavia) (17°38'S., 149°37'W.) is located 2 miles S of Passe de Taapuna. From this point, the W coast of Tahiti trends SSE 7 miles to Pointe Maraa, the SW extremity of the island. The coastal reef fronts this coast at a distance of 0.2 to 1 mile.

An airport has been constructed on the coastal reef parallel with the coast and extends from Pointe Nuutere, located 0.75 mile SW of Passe de Papeete, to Pointe Faaa. The airport's control tower and three radio masts, close E of the runway, are conspicuous; all of the structures exhibit aircraft warning lights.

Chenal de Faaa, inside the barrier reef, connects Port de Papeete with Passe de Taapuna. The fairway has a least width of 45m and depths vary from 8 to 27m; however, there are several mid-channel shoals; local knowledge is necessary in making transit of this channel. The channel is occasionally used as a seaplane landing area. The airport is situated throughout the S stretch on the shore of Faaa.

Passe de Taapuna is dangerous and is not recommended. It is more than 90m wide between the reefs, but it is encumbered by shoals; one has a depth of 1.7m. Range lights, in line bearing 082.3°, mark the channel entrance. If compelled, use this pass in a calm sea and with sufficient speed to stem the outflow.

The current always sets out, especially when the sea is heavy upon the reef; at such times, the surf breaks upon the shoals in the pass, which then becomes a mass of breakers.

Vallee de la Punaruu, 1.8 miles S of Passe de Taapuna, is an immense gorge cutting the mountain from top to bottom. The mountains of the interior may be seen through this gorge.

Baie de Punaauia (Punaavia), close N of Pointe Punaauia, is a small bight in the barrier reef, about 0.7 mile wide. It is open, and the heavy SW swell rolling in on the gravel and sand beach of the bay nearly always renders landing both difficult and dangerous.

Baie de Punaauia connects Chenal de Faaa in the N and Passe de Taapuna in the S. The navigable channel through the lagoon is marked by beacons and lighted beacons (port and starboard hand). It is narrow and tortuous in places, and has a least depth of 12m at the S end. The channel is accessible to large vessels, but local knowledge is essential. A prohibited zone on the W side of the channel (17°34.0'S., 149°37.6'W.) is marked by yellow beacons.

Paea is a village 4 miles S of Pointe Punaauia. Boats may pass inside the reef between the point and the village. Paea

may be easily identified by Vallee Orofere (Orofere Valley), which appears to extend to the center of the island.

1.53 Pointe Maraa (17°44'S., 149°34'W.), the SW extremity of Tahiti, lies 3 miles S of Paea. The barrier reef lies 0.6 mile off the point. Pointe Maraa is low, wooded, and projects 0.1 mile from the foot of the mountains. It may easily be recognized from seaward by the sudden turn in the direction of the coast from the S to the E.

Passe de Maraa (Maraa Pass), S of Pointe Maraa, is about 0.1 mile wide and open to the SW. At the entrance the points of the reef on each side extend nearly 0.1 mile seaward of the breakers.

Tides—Currents.—The current in the pass nearly always sets W. In the winter season, when a heavy SW swell is common, the current attains a rate of 4 to 5 knots, and on meeting the sea, causes it to break across the entrance, making the pass impracticable. The pass should not be attempted without local knowledge.

Anchorage.—There is anchorage in Baie de Maraa, within the pass, in a depth of 20m, sand, with Pointe Maraa bearing 281°, distant 0.3 mile.

From Pointe Maraa the coast trends 6 miles ESE to Mahaiatea (Mahaitea Point). The appearance of the coast changes, and the mountain slopes are wooded down to their feet. About 2.5 miles E of Pointe Maraa the mountains recede, leaving a plain 0.5 mile broad and 5 miles long.

From Pointe Maraa the barrier reef extends 3.5 miles E, about 0.8 mile from the shore; inside the reef are a series of large basins strewn with coral patches, with deep water between them.

Passe de Topiro (Topiro Pass) and Avaiti (West Avaiti), 1.3 miles ESE and 3.5 miles ESE, respectively, of Passe de Maraa, are passes that are suitable for boats only in calm weather.

Baie Popote (Popote Bay) is formed by a break in the barrier reef close W of Mahaiatea. The entrance is restricted to about 0.3 mile by some banks extending NW from the reef on the E side. The depth inside does not exceed 20m, but it is too exposed to the SE swell to be a safe anchorage.

From Mahaiatea to Pointe Oneroa, 7.8 miles E, the coast is indented with several coves. The barrier reef lies up to 1.5 miles offshore, and is breached by several passes.

Passe Teavaraa, 0.5 mile SE of Mahaiatea, is wide but has only 4m of water; the sea almost always breaks across it. The pass is dangerous, but it can sometimes be used by small vessels with local knowledge.

1.54 Passe Aifa (17°47'S., 149°25'W.), 3 miles E of Passe Teavaraa, leads directly into Baie d'Aifa. The pass is about 0.2 mile wide, but the deep channel between a bar on the W side and a reef on the E side is only 45m wide. Passe Aifa is easy to navigate in good weather, but is dangerous when the S swell is heavy; in these conditions the outgoing current sets strongly onto the bar.

At each end of Baie d'Aifa are good anchorages, but local knowledge is necessary.

Passe Rautirare, 1.3 miles E of Passe Aifa, is a deep pass 270m wide, open to the S. Bassin de Papeuriri (Papeuriri Bay), within Passe Rautirare, is about 0.4 mile in diameter. The bay is free of dangers and the depth varies from 14 to 25m. Depths

of less than 9m extend 130m from shore. Pururu is situated on the reef on the E side of the bay.

The coast opposite Pururu bends 0.5 mile N, and then trends irregularly E for 3 miles to Pointe Oneroa. The mountains, wooded to the base, are cut by a series of gorges, parallel with one another, from which several rivers flow.

Passe Temarauri, which leads to Port Papeari (Papeari Harbor), lies 2.5 miles E of Pururu. The pass is about 0.4 mile long and 130m wide. The E reef extends SSW in front of the pass and forms a bar which is generally unwise to cross. A small reef, awash, lies about 0.3 mile inside the entrance. When entering this pass, care must be exercised to guard against the current which sets on the W side.

Anchorage.—Port Papeari affords anchorage off the mouth of a small rivulet, in depths of 25 to 29m, mud, about 0.3 mile from shore.

Anchorage may be obtained anywhere in the bay; however, a vessel would not be sheltered from strong winds and a heavy sea from the S.

1.55 Port Phaeton (17°43'S., 149°19'W.) lies at the N end of an inlet NNE of Pointe Oneroa. The shores of the inlet are indented by several small bays which are blocked by coral.

On the W side, the mountains approach the shore and fall abruptly to the Isthme de Taravao, NE of the inlet. On the E side of the inlet the shore is low and wooded, and the land rises in gentle and uniform slopes to the high, rugged mountains in the central and S parts of Presquile de Taiarapu (Taiarapu Peninsula). From Anse Mitirapa S, the hills approach the shore.

The entrance to Port Phaeton, located 1.5 miles E of Passe Temarauri, is divided into two channels by Recif Matuu.

Passe de Teputo (Teputo Pass), S of Recif Matuu, is more direct. It is deep and clear of dangers, but the pass narrows to 120m, and when clear of Recif Matuu, vessels are required to make a sharp turn; therefore, a vessel using this pass should have a smooth sea and the reefs should be visible.

Passe Matuu, W of Recif Matuu, is encumbered by reefs in its W part; the largest one lies in the center of the pass. Between this latter reef and Recif Matuu, the pass is deep and about 90m wide, but it has a sharp elbow and is not marked; it should only be used in case of absolute necessity.

Passe Tapuaeraha (17°47'S., 149°18'W.) is the only pass large vessels should use in the approach to Port Phaeton. The pass is marked by a lighted beacon, and lights in line bearing 057.2° lead into Bassin de Tapuaeraha (Tapuaeraha Harbor).

Passe Tapuaeraha is about 0.3 mile wide, but the navigable width is about 0.1 mile wide, with a least charted depth on the range line of 31m. Recif Roae has a charted depth of 29m on the range 0.3 mile within the entrance, and 8.7m charted 0.1 mile N of the range line, 0.1 mile within the entrance.

From Bassin de Tapuaeraha, the pass inside the reef leads NNW to Port Phaeton. Recif Toatara is located in the N part of the basin. It should be passed on its W side even though this channel is the narrower of the two. Basin de Tapuaeraha and most of the basin N to Port Phaeton afford good anchorage, in depths of 25m to 40m. At about 0.3 mile SE of Pointe Riri, on the coastal reef near Pointe Pautu, there are two bollards to which vessels of 200m long, drawing 12m, can moor stern-to.

1.56 Port Vairao (17°48'S., 149°17'W.), another basin within the barrier reef, lies between the S end of Bassin de Tapuaeraha and the N end of Pointe Matahiae, about 1 mile S. This basin is entered from the N through Bassin de Tapuaeraha. There are several reefs in Port Vairao, but not all of them are marked. Anchorage may be taken almost anywhere among the reefs, in depths of 27 to 32m, sand and mud. Large vessels have been reported to use this anchorage. Pilotage is available from Papeete if ordered in advance.

From Pointe Matahiae, the coast trends ESE to **Pointe Fareara** (17°52'S., 149°09'W.), the SE extremity of Presquile de Taiarapu. This part of the coast is dominated by high mountains, cut by deep gorges and valleys leading towards the center of the peninsula. In the vicinity of Pointe Fareara the mountains slope steeply to the sea, forming cliffs which the sea breaks heavily against.

The barrier reef from Pointe Matahiae to its termination, 0.8 mile W of Pointe Fareara, follows the trend of the coast, with its outer edge lying about 0.6 mile offshore; however, in places it lies 1 mile offshore. The barrier reef terminates abruptly, turning N to about 0.1 mile of the coast. East of this, a series of coral banks lies parallel to the coast at a distance of 1 mile offshore.

The basins inside the barrier reef along this coast afford anchorages to small vessels, but only those with local knowledge should attempt to navigate them.

1.57 Port du Beaumanoir (17°51'S., 149°13'W.) is a basin about 3 miles long and about 0.4 mile wide between the barrier reef and the shore. It has general depths of 14 to 46m, sand and mud. It is closed at its W end by a reef.

This large basin is entered by Passe Puuotohe, 6.5 miles SE of Passe Tapuaeraha, or by Passe Vaiau, 2.5 miles farther E.

Passe Puuotohe is about 0.2 mile wide, but the fairway, which is 7m deep, is reduced to a width of about 45m by a shallow spit extending from the E reef. On the E side at the entrance there is an above-water reef, and on the W side is a least depth of 1.7m. The pass is only 90m long and opens out quickly after the breakers are passed. This pass is dangerous and should not be attempted during strong winds or heavy swell.

Passe Vaiau lies S of Mont Faretua, whose summit is 972m high. The pass is 0.1 mile wide, but a reef, awash, divides it into two channels. The E channel is only practicable for boats in good weather. The W channel is 90m wide, but has a small coral head near its inner end, with a depth of 5m.

Passe Vaiau should be approached with Mont Faretua bearing 008°. When the peak of Sommet Matarii (Matarii), 203m high and about 0.3 mile within the coast, bears 352°, a vessel should steer for it on that bearing, keeping close W of the 5m patch described above. When within the pass, a WNW course will lead to Port du Beaumanoir, or an E course will lead to Port de Vaiau. Local knowledge is necessary.

Passe Tutataroa, 1.5 miles E of Passe Vaiau, leads to Port de Vaiau. It is located between the shore and the barrier reef, and is 0.1 wide and 0.4 mile long in a W direction. It has been reported that a draft of 10m may be carried through the pass.

In the approach to Passe Tutataroa, the line of banks which project SE from the barrier reef are crossed; these banks are dangerous when the swell is strong.

Cote de Pari is that part of the coast that extends from Passe Tutataroa to Pointe Fareara and then 2.8 miles NE to the Riviere Vaiote. This stretch of coast presents a different aspect from the remainder. It has no barrier reef, and the mountains rise steeply above a line of cliffs, which SE seas break against. This coast is dangerous and should be avoided.

Recif de Faratara, a chain of sunken reefs with depths of 5 to 20m, lie off Cote de Pari, with its outer edge 1 to 1.5 miles offshore. There is deep water between the reef and the coast, but it is encumbered with shoals which break in a heavy sea. When the swell from the SW is heavy and a sea is raised by E winds, there are tremendous breakers over the reef.

The barrier reef commences again off the Riviere Vaiote and extends N at 0.25 to 0.5 mile offshore. At the S end of the reef there are three wooded islands.

1.58 Passe d'Aiurua (17°49'S., 149°07'W.) is narrowed to about 90m by a spit extending S from the barrier reef. To enter this pass, steer for the sharp peak of an unnamed mountain located 1.3 miles inland, bearing 276°. This bearing clears the spit. A narrow unmarked channel leads from the pass into the lagoon to the S. It also connects with Passe de Vaionifa, about 3 miles N, by a deep channel inside the barrier reef.

Pointe Vaitoto is located about 2.5 miles N of Passe d'Aiurua. A river which descends through a deep and cliffy gorge discharges here through a delta with four mouths. Passe de Vaionifa, which should only be used by vessels with local knowledge, is located 0.5 mile NE of Pointe Vaitoto.

Pointe Tautira (17°44'S., 149°09'W.) is a low, wooded tongue which projects 0.8 mile N from the general coastline, located 3 miles NNW of Pointe Vaitoto. This point is formed by the deposits of a river.

The barrier reef rounds Pointe Tautira at a distance of 0.2 mile and breaks off abruptly W of the point.

From Pointe Tautira, the coast trends W 5 miles to **Pointe Tiitau** (17°44'S., 149°14'W.). The general direction is straight, but two low, wooded points, project about 0.3 mile seaward. The mountains behind the coast are steep and cliffy. The only break in the mountains is a valley which opens between the two points.

The barrier reef forms again about 0.5 mile W of Pointe Tautira, forming with the point, Baie de Tautira (Tautira Bay). The barrier, interrupted by passes, continues on westward, about 0.5 mile offshore.

Baie de Tautira opens to the N, affording protection from winds NE through E and S to WNW, but is dangerous with those from the N to NW. The best anchorage is about 0.2 mile from shore, in 15m, sand, with the extremity of Point Tautira bearing 045°.

Port de Pihaa, a deep basin within the barrier reef, extends from Pointe Mataiva at the W end of Baie de Tautira to Pointe Pihaa, 1.5 miles WNW. It is entered from the E end from Baie de Tautira. A 4m patch lies in the fairway of the approach, 135m outside the entrance. The entrance from the W end is about 45m wide between the fringing reefs N of Pointe Pihaa. Neither entrance should be attempted without local knowledge.

Anchorage in the W part of Port de Pihaa is good. Anchor between 0.3 and 0.6 mile ESE of Pointe Piha, in depths of 29 to 35m, sand and mud.

Passe de Taharoa, a break in the barrier reef about 0.4 mile wide, is located close W of Port de Pihaa. It leads into Baie de Taharoa, which lies between Pointe Pihaa and Pointe Vaiturutu, about 1 mile WNW. Banc Toataa, just within the entrance, has a least depth of 1.6m.

To enter, a vessel should steer for a waterfall located in a valley 0.5 mile S of Pointe Pihaa, bearing 162°. This course leads E of Banc Toataa. Only vessels with local knowledge should enter this pass.

1.59 Port de Pueu (17°43'S., 149°13'W.), a small basin, lies within the barrier reef, W of Pointe Vaiturutu. It may be entered at its E end from Baie de Taharoa, through a channel marked by beacons, or from the W by an inner channel leading from Passe de Tiitau. Neither of these entrances should be attempted without local knowledge.

Port de Pueu is only 0.3 mile in extent, but affords anchorage, in 31 to 42m, sand and mud.

Passe de Tiitau, is the channel between the W end of the barrier and **Banc Toapu** (17°43'S., 149°14'W.); the pass is about 0.2 mile wide.

From Pointe Tiitau the coast trends W for about 3 miles to Isthme de Taravao and from there it turns N to Passe de la Boudeuse (Boudeuse Pass), 7 miles distant.

The mountains, which are high and steep behind Port de Pueu, descend gradually toward the isthmus. The seaward side of the mountains are, in general, perpendicular cliffs.

On the highest point of the isthmus, and visible from the sea to the E, stands Fort de Taravao.

Northward of the isthmus, the densely wooded mountains form the coastline, broken only by numerous ravines and valleys.

From Banc Toapu, the greater part of the barrier reef is submerged, but forms a long chain of shoals trending W to Passe de Papeiri, about 3 miles distant. The width of the reef is not more than 0.1 mile, and the depth varies from 1 to 10m, though in some places the coral is awash.

1.60 Baie de Taravao (17°43'S., 149°16'W.), within the barrier reef, is more than 3 miles long and 1 mile wide. The bay is entered from the E by Passe de Tiitau. It may also be entered through Passe de Motu Nono, Passe de Taravao, and Passe de Papeiri. The general depths in the bay are 34 to 50m; it shoals near the shore, and has a mud bottom.

A wooded islet, Motu Nono, lies inside the barrier reef. It is surrounded by a shoal extending 0.1 mile from its beach. An isolated patch, with a depth of 2m, lies 0.4 mile E of the islet, and two isolated patches lie WNW of the islet, one 4m depth at 0.2 mile distant, and another 5m depth lies 0.85 mile distant.

Passe de Motu Nono, a depression in the line of reefs with depths of 7 to 10m, may be entered by small vessels with the center of Motu Nono bearing 203°. When clear of the line of breakers, alter course to clear Motu Nono and its fringing shoal.

Passe de Taravao may be entered where the depth is 8.6m on the reef by steering for Fort de Taravao on course 245°; to clear a 4m depth, alter course S after crossing the line of breakers.

Passe de Papeiri, 0.5 mile NW of Passe de Taravao, is about 0.2 mile wide, with a least depth of 11m. Range lights lead through the pass.

None of these passes should be entered without local knowledge.

From Passe de Papeiri the barrier reef, which is awash, extends N about 1.3 miles to Passe de Vaihi, at a distance of about 0.4 mile offshore; the deep basin formed inside the reef is known as Port de Vaitoare. **Recif Paratahi** (17°40'S., 149°17'W.) is about 0.3 mile long N-S, and about 0.2 mile wide.

Port de Vaitoare affords good anchorage throughout, in 35 to 50m, mud, good holding ground. A good berth is about 0.2 mile offshore, opposite the village of Vaitoare.

Port de Vaitoare may be entered from the S through Passe de Papeiri, or from the N through Passe de Vaihi, or Passe de Faone. Passe de Vaihi is deep, but is only 90m wide between the spits extending from the reefs on either side.

Passe de Faone lies N of Recif Paratahi and is about 0.5 mile wide. Within its entrance the pass is divided into two channels by a projection of the coastal reef extending about 0.15 mile E of Pointe Poihahi (Teruafaroa); the N channel leads into Mouillage de Faone and the S into Port de Vaitoare. There is an isolated depth of 5.9m in the N part of Passe de Faone, and an isolated 1m depth about 0.16 mile offshore E of the church at Faone. The best anchorage in Mouillage de Faone is in 26m, with the church in Faone bearing 215°, distant 0.3 mile.

The coast between **Faone** (17°40'S., 149°18'W.) and Hitiaa, 4 miles to the N, is steep, broken by numerous valleys, and in some places towers over the sea.

The barrier reef on this coast trends N for about 0.8 mile until off the village of Otuofair, the reef recommences off the village Faatautia, 1.3 miles N, and continues to Hitiaa.

Porte de Temato, located inside the barrier reef between Faatautia and Hitiaa, is a deep channel about 2 miles long and 0.2 mile wide, gradually narrowing near the N end. Anchorage can be obtained in the middle of the port, in 40m, mud.

From Hitiaa, the coast trends NNW for about 1 mile to Pointe Mataorio, which is low and wooded. Baie de Taipahia is formed N of Pointe Mataorio, and from this bay the coast curves NW about 1 mile to Pointe Putaiamo.

The barrier reef NW of Hitiaa is broken by a pass about 0.4 mile wide. An islet is located on the barrier reef on the N side of the pass, another islet is located on the end of the reef, 0.4 mile N. The barrier reef submerges for 0.5 mile, forming a shallow pass, then comes to the surface and continues NNW for about 1 mile to abreast Pointe Putaiamo.

1.61 Passe de la Boudeuse (17°36'S., 149°17'W.) is narrowed by a shoal extending about 0.2 mile from the islet on its N side. There is a rock, with a depth of less than 2m in the middle of the pass, and Mouillage de Bougainville, inside the barrier reef N of the pass, is encumbered with numerous isolated shoals. This pass and anchorage should not be used without local knowledge as a swell rolls unobstructed through the pass. This anchorage is unsafe in winds between the S and E.

Baie de Taipahia affords anchorage, in a depth of 30m, sand, with the islet Motu Puuru, 0.5 mile NE of Pointe Mataorio, bearing 050° and that point bearing 148°.

Mouillage de l'Ilot Nansouty lies between the coast and the barrier reef N of Motu Puuru.

Anchorage.—Anchorage may be obtained 0.5 mile S of **Ilot de Nansouty** (17°34'S., 149°17'W.), in depths of 35 to 46m, sand and mud. The anchorage may be approached from Baie de Taipahia or from the NNW from Passe de Mahaena. There are two shoal spots, with depths of 3.2 to 3.6m, which should be avoided when approaching the anchorage from the N, and a reef, with a least depth of 2.3m, which should be avoided when approaching from the S.

Passe de Mahaena, about 1.3 miles NNW of Motu Puuru, is 0.5 mile wide; it lies E of the entrance to Vallee de Mahaena. The pass is deep, but should only be entered by vessels with local knowledge.

From Passe de Mahaena the coast trends WNW 11 miles to Pointe Venus. The mountains are close to the coast and the important Vallee de Onoheha is easily identified by Le Matotea, a mountain at its head 2 miles inland.

Along this coast the barrier reef is submerged and forms a series of dangerous shoals with general depths of about 5.5m, sand, which extend from 1 to 1.5 miles from the shore.

Between the shoals and the shore there are large open basins that vary in depth from 37 to 42m in the E to 18.3 to 22m in the W part.

Several wide passes give access to these basins, and in good weather, small vessels can pass over the shoals when sure of the marks. These passes should not be attempted except under the most favorable weather conditions, and then only with local knowledge.

Banc de l'Artemise (Artemise Shoals) extends 2 miles in a NW direction from Passe de Mahaena and then turns sharply W for 2 miles to **Passe d'Onoheha** (17°31'S., 149°21'W.).

Passe d'Onoheha, about 0.4 mile wide, has more than 61m in mid-channel in the entrance between the shoals.

Passe de Faarumai, about 1 mile W of Passe d'Onoheha, is 0.2 mile wide. Recif Pupuura, inside the entrance 0.3 mile offshore, has a least depth of 6m.

Passe de Papenoo, 2 miles NW of Passe de Faarumai, is about 0.3 mile wide and about 1.4 miles offshore.

1.62 Motu Aau (17°29'S., 149°28'W.), a small, wooded islet, is located 0.9 mile ESE of Pointe Venus; a reef extends 0.2 mile NW of the islet. A basin is formed between the islet and the fringing reef extending E from Pointe Venus; it is untenable and dangerous with winds from between the NE and NW.

The channel between the two islands is 7.5 miles wide between the barrier reefs; it is deep and clear of dangers.

When there is a fresh E breeze N of Tahiti, it is generally calm in this channel, but the currents and eddies are variable and uncertain.

When there is a meeting of E and W winds in this channel, a heavy sea is raised, appearing like a line of breakers. When this condition occurs the E extremity of Moorea becomes more dangerous, which under any circumstance should be given a wide berth.

The NW coast of Tahiti should not be closely approached, especially at night, as a portion of the W current striking Moorea is deflected and sets directly onto the barrier reef off that part of Tahiti.

A vessel entering this channel at night from the SW should make the light on Pointe Venus, after passing the S extremity of Moorea before standing to the E.

Moorea

1.63 Moorea (17°32'S., 149°50'W.) has a broken outline and numerous peaks; Mont Tohivea, 1,207m high, is located in the S central part of the island. There are numerous mountains throughout the island between 610m and 914m high, but the most remarkable is Muaputa, 830m high, located 2 miles NNE of Mont Tohivea. It has a hole through its summit which may be seen through on a SE bearing. The island is thickly wooded, but some of the peaks are bare.

The island, which is triangular-shaped, is about 8 miles long on each side. It is surrounded by a barrier reef which has several passes through it. Baie de Cook and Baie d'Opunohu, 2 miles W of Baie de Cook, are on the N side of the island.

The island is administered by a French Agent, who usually resides at Afareaitu, situated near the middle of the E coast.

Pointe Faaupo (17°29'S., 149°45'W.) a low, wooded point, is the E extremity of Moorea. From this point the coast trends NW 1.8 miles to Pointe Aroa, another low point, where it turns WSW 2.5 miles to Pointe Pavau, the E entrance point to Baie de Cook.

The barrier reef fringes the coast between Pointe Faaupo and Pointe Aroa, and then extends to 1.25 miles off Pointe Pavau. The 500m curve lies 0.9 mile off Pointe Faaupo and 2 miles off the coast between Pointes Aroa and Pavau.

Baie de Cook (Paopao Bay) (17°29'S., 149°49'W.) is entered between Pointe Pavau and Pointe Nuurua, 0.6 mile WSW; the bay extends 1.3 miles S. The fringing reef extends up to 160m off the E side and 0.1 mile off Pointe Nuurua. The bay has depths of 32m decreasing gradually to the 10m curve, which lies 135m from the head of the bay.

Depths—Limitations.—There is a T-shaped pier with a least depth of 4.5m alongside. A light shows on the coastal reef, close N of the pier.

Passe Avaroa, the entrance to Baie de Cook, is entered 0.7 mile NW of Pointe Pavau. The pass is about 0.1 mile between the 20m curves; it has a least charted depth of 26m. The pass is marked by a lighted range.

Anchorage.—Anchorage is available, in a depth of 32m, mud, on the intersection of two ranges shown from the W shore of the bay. It should be noted that strong winds blow down from the mountains.

1.64 Papetoai (17°29'S., 149°51'W.) ([World Port Index No. 55830](#)) is a small town on the W bank of Baie d'Opunohu, located about 2 miles W of Baie de Cook. The bay is enclosed by precipitous mountains; however, an extensive valley lies at the head of the bay.

Depths—Limitations.—The bay is entered through Passe Tareu, which is nearly 270m wide and has a depth of 69m in the middle, but shallow water borders the reefs on either side. The depths in the bay decrease gradually to 20m, 0.3 mile from its head.

Anchorage.—Anchorage is available, in a depth of 20m, on the intersection of two sets of range beacons. The first, which

marks Passe Tareu, are in line bearing 157°, while the second pair are in line bearing 246.5°.

From Papetoai, the coast trends 2.5 miles W to **Pointe Tehau** (17°29'S., 149°54'W.); the barrier reef lies about 0.8 mile offshore. Two islets lie inside the barrier reef NW of Pointe Tehau.

From Pointe Tehau the coast trends in a SE direction 8.5 miles to **Pointe Parao** (17°35'S., 149°49'W.), the S extremity of the island. The barrier reef lies about 0.8 mile offshore along this coast, and the 500m curve lies 1.3 to 1.8 miles off.

Passe Matauvau gives access to an anchorage capable of handling a ship, but all of the reef passes require local knowledge.

1.65 Passe Matauvau (17°34'S., 149°52'W.), about 0.9 mile SSE of Passe Avamotu, is 0.2 mile wide and has a depth of 13.4m. Shoal water extends about 0.2 mile SW from the reef on the N side of the pass and the sea nearly always rolls heavily onto this shallow area. The current running out of the pass sets toward it.

Passe Matauvau may be approached with Mont Muaroa bearing 046°, taking care not to confuse it with the two peaks 0.5 mile S of it. Steer through the pass keeping 90m W of the reef on the E side; when within the pass steer 067°. Port Haapiti is about 0.4 mile in diameter, with general depths of 14 to 30m over sand. Take care to avoid a 0.5m patch at the E end of the anchorage. This anchorage affords little protection from a W sea.

Passe Avarapa, 2.5 miles SE of Passe Matauvau, leads N through the barrier reef to Baie de Vairapa. A depth of 3.5m is charted in the middle of entrance to the pass. The pass is 0.2 mile wide, and the general depth is 5.8m. Baie de Vairapa is deep, but the shelter is not good and there are several unmarked shoals.

From Pointe Paroa the coast trends 1 mile E to **Pointe Nuupere** (17°35'S., 149°48'W.), and then turns NNE 6.5 miles to Pointe Faaupo. This coast is indented by several small bays backed by high, rugged mountains.

The barrier reef lies about 0.8 mile offshore to Pointe Nuupere, then it follows the coast about 0.5 mile off to Pointe Faaupo, where it joins the shore.

Passe Teruaupu, 1.3 miles NNE of Pointe Nuupere, is about 275m wide, but the navigable channel is only 92m wide. It should not be entered without local knowledge.

The pass leads into Baie de Haumi; there are channels, marked by beacons, that extend both N and S from the bay.

Passe Tupapaurau, 1.3 miles NNE of Passe Teruaupu, has a least depth of 4m in the deepest part. Small schooners and boats can use the pass in good weather, but in bad weather the sea breaks heavily across it.

Baie Putoa (Baie Afareaitu), entered through Passe Tupapaurau or from the S through the pass from Baie de Haumi, affords safe anchorage, in depths of 30 to 49m, mud.

Passe Vaiare (17°31'S., 149°46'W.), 2.3 miles N of Passe Tupapaurau, is 180m wide; it is deep, clear of danger, and safe in all weather. The reef on the N side of the pass is awash in places, and a small bare islet is located on the reef on the S side. Range lights, in line bearing 272°, mark the pass.

Baie de Vaiare (Baie de Teavero) is a deep, sheltered basin. A village, with a wharf having an alongside depth of 3.3m, lies

about 0.8 mile NNW of Passe Valiare. Anchorage is available within the bay, in depths of 20 to 40m, mud. Anchorage is prohibited between the range beacons.

1.66 Tetiaroa (17°03'S., 149°34'W.) is an atoll which consists of a number of small, low islets covered with coconut palms. There is no passage into the lagoon, but small boats can pass over the reef. A light is shown from the S extremity of the atoll.

Maiao (Tubuai Manu) (17°39'S., 150°38'W.), when seen from a distance, resembles a ship under sail, but on closer approach it is easily identified by two hills, which nearly divide the island. One of the hills is 154m high. A narrow fringing reef surrounds the island, except on its SW side where the reef extends seaward for 0.75 mile. There is a boat passage through the reef on the NW and S sides of the island.

Depths—Limitations.—The NW channel, oriented at 135° and dredged to 2.5m, is 120m long and 30m wide. Its entrance is marked by two lighted beacons. The open basin, 60m long and 40m wide, has a landing wharf that is 24m long. The swell from the SW to the NW can unfurl in the channel and create violent undertow in the open basin.

It was reported (1999) that the depth in the channel and along the landing wharf are not more than 1.5m. No anchorage is available around the island.

1.67 Huahine (16°45'S., 151°00'W.) is the farthest E of Iles Sous le Vent. The island is about 8 miles long N-S, and 5 miles wide; a narrow channel, with a least depth of 0.3m, divides the island in two parts.

Depths—Limitations.—Passe Farerea, in the middle of the E side of the island, leads to Baie de Maroe. The pass is narrow but deep, but with E winds it is dangerous. A current has been reported to set S across the entrance with N winds.

Two white range lights standing at the foot of a remarkable cliff, and a white house at an elevation of 30m, all of which are in line bearing 262.5°, mark the channel entrance. The rear beacon has been reported to be impossible to see until on the alignment for vessels approaching from the N.

Baie de Maroe is a deep and extensive basin extending WSW for about 2 miles from the inner end of Passe Farerea.

The bay is sheltered except from the E; squalls from the mountain sometimes occur suddenly.

Aspect.—The mountains in the N part of the island attain a height of 669m, and a height of 462m in the S part. With SE winds the land is generally covered with clouds and hidden by rain squalls, especially during the night when it is imprudent to make an approach. In thick weather the N point is the best landfall.

The barrier reef lies up to 0.9 mile off the SW side; in some places it is awash and in others it is sunken. From the NE side to the NW side it is a fringing reef.

Anchorage.—Anchorage is available in the W part of the bay, in depths of 30 to 35m, over a mud and sand bottom, good holding ground.

Caution.—The remains of an old beacon, with a depth of 1.9m and considered an obstruction to navigation, lie about 120m WSW of Tetoaihurei Point.

Passe Tiare, 1.5 miles N of Passe Farerea, leads W then SW into Baie Faie. The pass is deep, but narrow, and should only be used by vessels with local knowledge.

1.68 Fare (16°42'S., 151°01'W.) ([World Port Index No. 55825](#)) is situated about 0.5 mile SE of Pointe Teffaa, on the NW side of the island. The port is protected by a coastal reef which extends about 0.3 mile offshore SW of Pointe Teffaa, and the barrier reef which lies 0.7 mile offshore, WSW of the village of Fare.

Depths—Limitations.—There are three berths available from E to W, as follows:

1. A quay, 61m in length, with alongside depths of 8 to 9m.
2. A quay, 82m in length, with alongside depths of 5 to 8m.
3. A quay, 29m in length with a depth alongside of 1.5m.

Due to the strong current alongside the quays, it is recommended to use an anchor when berthing.

The port of Fare is entered from the NW through Passe Avamoa, which has a width of about 0.2 mile between the coastal reef on the N and the barrier reef on the S. There is a least depth of at least 10m on the range line. There are two lights, in line bearing 126.5°, situated 0.3 mile SSE of Fare. This range will lead through Passe Avamoa to the anchorage 0.1 to 0.2 mile offshore W of Fare. Vessels should moor head and stern in the direction of the pass, in 18.3 to 29m, mud.

Caution.—Caution is advised as the range lights may be obscured when only slightly off the range line.

1.69 Passe Avapehi (Passe Avapeihi) (16°43.6'S., 151°02.9'W.), about 1 mile SSW of Passe Avamoa, is about 0.2 mile wide between the barrier reefs and has a least charted depth of 17m; the passage leads to Baie Haavai. Two beacons on shore, in range 094.5°, lead through Passe Avapehi to Baie Have.

To proceed to Fare from Passe Avapehi, steer a course of 025° for the flagstaff which stands on the wharf.

A deep intricate channel is formed inside the barrier reef from Passe Avapehi, SSE 3 miles to Port Bourayne. This channel and the channel inside the barrier reef which leads farther SE to Baie Teapaa and Baie Haapu, 0.75 and 1.5 miles, respectively, from Port Bourayne, should only be used by vessels with local knowledge.

Haavai Bay (16°44'S., 151°02'W.) is well sheltered, but with depths too deep for the anchoring of small vessel. An anchor buoy for the mooring of crossing vessels is anchored at the opening of the bay; it cannot be used without special authorization and in addition, mooring is prohibited there at night. Anchorage for large vessels can be taken in the N part of Port Bourayne, in depths of 25 to 30m, mud.

Raiatea and Tahaa are two islands enclosed within the same barrier reef, located about 20 miles W of Huahine. Raiatea, the largest, about twice the size of Tahaa, lies in the S part. Together, the islands extend 23 miles in a N-S direction and are about 9 miles wide in places.

The barrier reef is about 2 miles offshore and encloses the channel that lies between the two islands. There are eight

passes through the reef to Raiatea, and two passes through the reef to Tahaa.

Tides—Currents.—A SE current with a rate of 2 knots has been experienced during an established NW wind about 10 miles W of the islands. Generally, the set is NW at less than 1 knot. Currents within the passes are generally weak, with the ebb being the stronger; however, the sea state outside the reef greatly affects the rate and set of these currents.

With winds from the SSE, a long and heavy swell is experienced off the island's SW side.

Raiatea (16°50'S., 151°24'W.) has a range of mountains which extends N-S. Near the center and at about 5 miles from the S end of the island, the highest peak of Mont Tefauaiti rises to a height of 1,017m. Numerous spurs extend to the coast, and the coastline is indented by many bays. Mont Tapioi, with a flat top, stands out at a height of 294m in the N part of the island.

Passe Teavapiti (16°45'S., 151°25'W.) is a break in the barrier reef approximately 3 miles SE of Pointe Motutapu, the N extremity of the island. Taoru, an island, divides the pass into two parts; the N pass is the principal pass used. Ofetaro, which is covered with brush and some coconut palms, is situated on the barrier reef 0.2 mile N of Taoru.

Passe Teavapiti is about 135m wide; there is a least charted depth of 12m on the range. Lights in line bearing 269.5° lead through the pass.

When the barrier reef has been cleared, about 275m NW of Taoru, lights situated off Uturoa, in line bearing 315°, lead inside the barrier reef to a point E of Pointe Tonoi; then follow the track as charted, or continue on course 315° to the wharf.

1.70 Uturoa (16°44'S., 151°27'W.) ([World Port Index No. 55800](#)), at the NE extremity of Raiatea, a natural coastal harbor, is the residence of the administrator.

Tides—Currents.—The tidal current within the barrier reef is strong in places; the general set is NW, but this may be affected by the prevailing wind and by the direction of the swell in the vicinity of the island. Off the wharf the flow is generally weak.

Depths—Limitations.—There is a wharf, 365m SE of the hospital, that will accommodate a vessel with a draft of 7m. A small craft pier extends about 50m SE of the wharf, while a second pier extends E from the shore close SE of the hospital.

Aspect.—The temple, a white building with a belfry, is situated in the NW part of Uturoa; the police station stands 275m SE of the temple. A hospital consisting of a yellow conspicuous building is situated 0.1 mile SE of the police station.

Pilotage.—A pilot can be made available from Papeete, if required.

Anchorage.—Anchoring vessels leave the range when about 0.8 mile SSE of the hospital, steering for a beacon on the reef N of Uturoa, bearing 327°. Four anchorage berths are available off the town, in depths of 31 to 39m, sand and coral, and are situated with the front range light on the following bearings and distances:

- a. 215°—410m.
- b. 241°—275m.
- c. 285°—595m.
- d. 309°—640m.

The 215° and 241° anchorages are the recommended berths, as the holding ground is good. The other two are subject to a strong NW set. Swinging room at all the berths is cramped.

Caution.—Caution is advised, as there is a depth of 15m on the 327° track, about 0.2 mile E of the front range light.

1.71 From Point du Roi Tamatoa (16°44'S., 151°27'W.), 90m N of the hospital in Uturoa, the coast trends 1.3 miles WNW to Pointe Motutapu, the N extremity of the island, then about 2.8 miles SW to **Pointe Mirimiri** (16°46'S., 151°29'W.). A 1.6m shoal lies 0.3 mile N of Pointe du Roi Tamatoa, and a 4.4m shoal is located 0.5 mile NNW of the same point. Reefs extend 0.4 mile N of Pointe Motutapu, and Grand Banc Central, separated from this reef by a channel 205m wide, extends 0.9 mile farther N.

A pass leads from the NE of Pointe Motutapa N within the barrier reef, E of Grand Banc Central, to the anchorage and the channel E of Tahaa. The pass is easy to navigate by vessels with local knowledge. In the absence of any beacons, the passage should not be attempted unless the reefs on either side are clearly distinguishable.

An aircraft landing strip, situated in an E and W direction, is situated close S of Pointe Motutapu.

An inner passage leads SW from Pointe Motutapu to Pointe Mirimiri. Vessels from the W whose destination is Uturoa may use this passage, but local knowledge is necessary or the services of a pilot are recommended. This inner passage is entered from Passe Rautoanui.

Passe Rautoanui (16°46'S., 151°30'W.) is a break in the coastal reef 0.5 mile W of Pointe Mirimiri. Generally, there is a SW set in the pass, caused by the prevailing E winds here.

The pass can be easily identified by the islets Tahunaoe and Torea, which lie on the N and S sides, respectively, of the pass.

A range light is situated on Pointe Mirimiri, and the front range light is situated 145m W. These lights, in line bearing 083.5°, lead through the pass.

A confined anchorage, in 30m, mud, can be taken in Baie Pufua, close S of Pointe Mirimiri.

From Pointe Mirimiri the coast trends in a S direction about 9.8 miles to **Pointe Tahoata** (16°55'S., 151°26'W.), the S extremity of the island. This coast is irregularly shaped and is indented by numerous bays.

The barrier reef, which lies up to 1.25 miles offshore, is breached in three places by passes.

Passe Tiano (Passe Tetuatiare) (16°50'S., 151°29'W.) is located 4 miles S of Passe Rautoanui. This pass is both dangerous and difficult, and is not recommended.

1.72 Passe Toamaro (16°51'S., 151°29'W.), about 1.8 miles S of Passe Tiano, is about 145m wide between the reefs and has a least charted depth of 10m. Toamaro, a small, wooded island, is on the inner part of the N side of the pass, and there is an islet on the inner part of the S side of the pass.

This pass leads to a safe anchorage inside the reefs and also to Baie Vaiaeho, to the N of the pass. Care should be exercised in the vicinity of the 5.2m patch, 0.2 mile E of the S extremity of Toamaro, and the isolated reefs which lie 275m N and 180m S, respectively, from the 5.2m patch.

A deep, intricate channel, available only to small craft with local knowledge, leads S inside the barrier reef from Passe Toamaro to Passe Punaeroa.

Passe Punaeroa (16°54'S., 151°28'W.), 2.5 miles S of Passe Toamaro, is about 0.3 mile wide, with a least depth of 7m, leading to a deep roadstead. Anchorage may be obtained as convenient, avoiding isolated shoals.

A deep, narrow channel trends SE to Pointe Tahoata, within the barrier reef; in places it is nearly blocked by the coastal reef.

From Pointe Tahoata, the coast trends NE to Pointe Puutarape, about 7 miles distant, then NW 7.5 miles to Passe Teavapiti.

Passe Nao Nao (16°55'S., 151°24'W.), located 1.8 miles E of Pointe Tahoata, is a pass across the barrier reef close E of the islet Nao Nao. The pass is 90m wide and has a narrow bar with a depth of 7m, on which the sea breaks heavily in bad weather. The pass can only be used by small vessels with local knowledge in good weather.

Oatara (16°51'S., 151°19'W.), a small island on the barrier reef, lies 6.5 miles NE from Passe Nao Nao. This islet lies 1 mile E of Pointe Puutarape, the E extremity of Raiatea.

Passe Teava Moa (Passe Teavamoa), about 1 mile NW, is a deep, narrow pass. A depth of 15m is charted close E of the entrance, and 9m is charted in the pass on the S side, close off the barrier reef. This pass leads to Baie Hotopuu, SW of the pass, and Baie de Toahiva (Baie Opoa), 1 mile W of the pass.

Baie de Toahiva affords good anchorage in the middle of the entrance, in 33m, mud, 180m S of a rock, awash.

Passe Iriru (16°47'S., 151°22'W.), 3.3 miles NW of Passe Teava Moa, leads SW through the barrier reef to Baie Faaroa. It is easily recognized as it lies between two islets, Iriru on the S and Tipaemau on the N. The pass is deep and about 135m wide between the edge of the barrier reefs. A drying reef is located 0.6 mile SW of Iriru.

A course of 217° will lead through Passe Iriru. When abeam Iriru's SW end, steer no less than 230° to clear the drying reef mentioned above. Baie Faaroa, entered about 1 mile SW of Iriru, offers anchorage in SW portion, with depths of 15 to 30m, over mud. Anchorage is prohibited near submarine cables which cross the bay's entrance.

There is a pass inside the barrier reef S to Passe Teava Moa and N 3.5 miles to Passe Teavapiti. These passes should only be used by vessels with local knowledge.

1.73 Tahaa (16°38'S., 151°29'W.) ([World Port Index No. 55780](#)) is nearly round; Mont Vaihaato rises to a height of 590m near the center. Two passes lead through the barrier reef off Tahaa, one on the SW side and the other on the SE side, into the lagoon surrounding the island. There are a number of islets on the barrier reef on the N side; many of them are wooded. The barrier reef is nearly awash in places, and in others, has depths of 3.1 to 3.7m.

Vaitoare (Village de Tahaa), the principal village on the island, is situated in the SE part; it may be recognized by a temple.

Passe Toahotu (16°39'S., 151°24'W.), 4 miles NE of the S extremity of Tahaa, may be identified by the islets of Toahotu and Mahea, which stand on the S and N side, respectively, of the channel.

The pass is about 0.1 mile wide between the barrier reef and is deep and clear of dangers; however, a shoal with a depth of 5.2m lies 410m NW of Toahotu.

Passe Toahotu should be entered on a mid-channel course of 293°, and when the N extremity of Toahotu bears 180°, course should be changed to 260° to pass S of the 6m shoal.

A pass inside the barrier reef leads SSW to Vaitoare. There is anchorage, in 37m, mud, 0.2 mile offshore, SE of the village.

From Vaitoare, the inner channel follows the coast WSW to abreast **Pointe Toamaro** (16°41'S., 151°28'W.), the S extremity of the island, then trends NW about 3 miles to Pointe Tiamahana, the S entrance point of Baie Hurepiti.

The inside pass from the N extremity of Raiatea leads E of Grand Banc Central to the anchorage of Vaitoare.

Passe Paipai (16°40'S., 151°31'W.), on the SW side of the island, provides access to Baie Hurepiti; it also gives access to the inner channel which encircles the island. There is a quay for coasters on the S shore of **Baie Tapuamu** (16°37'S., 151°33'W.); the quay has a depth of 6m alongside.

The pass is deep between the reefs on either side, which are awash. S winds cause a heavy swell in this pass.

Range lights standing on Pointe Pari (Pointe Tepari) lead through the pass.

Currents in the pass are reported to be strong.

Baie Hurepiti, entered between Pointe Pari and Pointe Tiamahana, 0.5 mile SSE, affords anchorage, in depths of 25 to 30m, sand, good holding ground.

Caution.—Mariners should note the presence of marine farms, best seen on the chart, which lie off the NW shore of the bay.

There is an inside passage from Passe Paipai NW, then NE to the N extremity of Tahaa. East of the N extremity of the island the passage is obstructed by a group of reefs and becomes intricate. From these reefs the passage SE to Passe Toahutu appears to be clear. This passage should only be used by vessels with local knowledge.

Bora-Bora

1.74 Bora-Bora (16°30'S., 151°45'W.) is composed of several islands enclosing a central lagoon, the whole being enclosed by coral reefs. The largest island of the group is Bora-Bora. A light is shown from Teturiroa, at SW extremity of the reef.

Aspect.—Bora-Bora is distinguished by the double-peaked Mont Pahia; the highest peak to the SE is 661m high. **Mont Otemanu** (16°30'S., 151°44'W.), close E of Mont Pahia, is the highest peak on the island, rising to a height of 727m. The E side of the island has a barren appearance. In general, this island group is more craggy than other islands of Iles de la Societe. A radio mast stands on the island's SW end.

The barrier reef is covered with islands, except on the S and SW side. This portion of the reef is awash in places, and in others, depths up to 3.1m exist.

Pilotage.—Pilotage is available and should be ordered from Papeete. Vessels are usually met 2 miles off the pass entrance.

Vessels should send their ETA to the Captain of the Port, Papeete at least 15 days in advance, confirming 3 days prior to arrival. The islands are governed by the administrator at Uturoa

in Raitea, who delegates his authority to a police superintendent residing in Vaitape, the principal village.

Passe Teavanui, the only passage through the barrier reef, is off the W side of the island. It is straight, free from danger, and has a least charted depth of 9.4m in the fairway; the edges of the reef are clearly visible.

The pass is marked by buoys and a beacon. The daymark (white square) situated 0.2 mile SE of Pointe Puhua is reported as conspicuous. A range leads through the pass. Within the barrier reef, course may be set on two leading lighted beacons bearing 133.5°, and that will lead through the pass. Port entry limits ship size to 220m overall length, 30m width, with a maximum draft of 9m.

The prevailing wind blows out of Passe Teavanui, but with strong NW winds, the sea breaks across the entrance, rendering it difficult to distinguish the channel. This condition may last from 2 to 15 days; it is most unfavorable during January, February, and March.

1.75 Vaitape (16°30'S., 151°45'W.) ([World Port Index No. 55770](#)), situated on the W coast of Bora-Bora, may be recognized by the church with a red steeple situated 0.3 mile WNW of the light marking Passe Teavanui. A pier able to accommodate vessels up to 500 grt is available here, with alongside depths of 3 to 4m; larger vessels Med-moor to this pier. A marina protected by rocks is situated at the N part of the pier. Because of the presence of coral heads around the landing wharf and the lack of solidity for mooring points, this post becomes dangerous when the wind picks up.

Anchorage.—Anchorage is available in Baie de Povai, in depths of 22 to 33m. The anchorage off Vaitape is in a depth of 33m, with the church bearing 067°, 0.4 mile distant.

Baie Faanui, N of Passe Teavanui, offers anchorage, in depths of 25m, sand and mud, on the bay's W side. A wharf about 130m in length lies on the S side of the bay, about 1.3 miles NNW of the church at Vaitape. In 1985, a report stated the wharf was in good repair, with alongside depths of 7.3m.

Anchorage is prohibited within 280m of the submerged water pipeline laid between Pointe Faripiti and Ilot Teveiroa; anchorage is also prohibited in the submerged pipeline area, best seen on the chart, between the main island of Bora-Bora and Motu Tape (16°30'S., 151°42'W.).

There is an aircraft landing strip on Motu Mute, an island on the N extremity of the barrier reef. There is a prohibited anchorage area extending from Motu Mute S to Bora-Bora. Anchorage is also prohibited in the vicinity of the pipeline which extends ENE about 0.4 mile to an island from the N entrance point of Baie Faanui.

1.76 Atoll Tupai (Ile Motu-Itu) (16°16'S., 151°50'W.) consists of a group of low, wooded islets, about 9m high, connected by a coral reef. It is 4.5 miles long N-S and 3 miles wide.

The area surrounding the atoll is said to be free from danger; however, its position and charted outline are not definite.

Small boats may enter the lagoon through a break in the reef located 1 mile S of the E extremity of the atoll.

One can land at the NW point of the island facing a hangar, passing by a narrow indentation in the reef which gives access to a partially-destroyed quay.

Maupiti (16°27'S., 152°15'W.) is a small mountainous island, 380m high. The peak provides an excellent navigational aid and is easily identified. Should the peak be obscured, it is possible to use the S end of the island as it is steep-to and defined.

The barrier reef extends for a distance of about 2 miles off the S side and about 1 mile off the other sides. The S part of the barrier reef, except for a few islets, is mostly awash, but the N part of the reef is above water and has some wooded islands on it.

The entrance to the lagoon is on the S side of the island. In bad weather the sea breaks across the entrance, and in good weather rollers are common. A strong current always sets out to the entrance. The pass is narrow and tortuous, and is only available to small vessels with local knowledge during good weather.

Atoll Maupihaa (Mopelia) (16°49'S., 153°57'W.) is roughly circular and about 5 miles in diameter.

The reef surrounds an extensive lagoon. The E side of the reef is occupied by a long, narrow band of dry land with numerous coconut trees. On the N and W sides there are a number of islets; many of them are covered with brushwood or trees. The reef on the S side is uncovered; some breakers indicate the presence of a danger.

A pass located about 1 mile SW of the N extremity of the atoll leads SE through the reef. The pass, about 27m wide between the reefs on either side, has depths of 9m at its outer end. The fairway at its inner end is encumbered by coral heads and by a shoal, with depths of less than 1.8m, which divides it into two channels. The N channel is practicable for small boats, and then for those with local knowledge only. The S channel has a least depth of 4m and also requires local knowledge.



Courtesy of Polynesie Passion

Maupiti Channel from N

1.77 Atoll Manuae (Fenua Ura) (16°32'S., 154°41'W.) is the farthest W of Iles de la Societe. The reef encircling the lagoon is about 7 miles long NNW-SSE and about 5 to 6 miles wide. There is a group of low, and consequently dangerous, islets on the reef. The E side of the atoll is said to be green with trees, but the W side is reported to be coral which breaks heavily for about 5 miles. The lagoon is only accessible to craft by a pass located at about 0.4 mile to the WSW of the N point. A cavity in

the barrier-reef also allows whalers on the E coast close to the town; craft must be pulled up on the reef flat. This landing as well as the crossing of the pass can only be planned in calm weather. At night or in thick weather, vessels should avoid approaching this atoll.

Atoll Motu One (Bellingshausen Island) (15°50'S., 154°31'W.) consists of four low coral islands covered with coconut trees and other vegetation on a reef of triangular form about 3 miles in extent. The reef is steep-to and has a number of rocks on it. There is no passage into the lagoon.

Iles Tubuai (Iles Australes)

1.78 Iles Tubuai lie between 21°45'S and 23°55'S, and 147°32'W and 154°50'W. This is a scattered group consisting of five islands surrounded by fringing coral reefs which are generally steep-to. The French Government agent for Ile Tubuai, Raivavae, and Rapa, resides at Ile Tubuai; the islands of Rurutu and Rimatara are administered by a similar official stationed at Rurutu. These agents are under the orders of L'Administrateur des Colonies, whose headquarters are at Papeete.

Iles Tubuai are volcanic in origin; they are high, except for Iles Marie, which forms an atoll. All the islands surrounded by reefs are usually steep-to. The sheltered lagoons are accessible only to small vessels, and navigation marks in Iles Tabuai are not reliable.

1.79 Rapa (27°36'S., 144°20'W.) is an irregular, circular form about 4.5 miles in diameter. There are several deep indentations in the shore; the largest is Baie de Haurei on the E coast.

Winds—Weather.—The prevailing winds from October to April are from the E, but about once in three weeks, during December, January, and February, W winds occur for a short period. From May to the middle of September, W winds with heavy showers prevail, blowing down the valleys into Baie de Haurei; the strongest W winds are felt in July and August. From native reports, typhoons are sometimes experienced. Gales of cyclonic character, though not common, occur at all times of the year.

The climate is generally temperate but moist; rains are frequent. The island is often covered with clouds and fog when the weather is clear a few miles out to sea.

Aspect.—Ahurei (Haurei), a village, is situated on the S shore of the bay, 1 mile WSW of Pointe Maomao. The aspect of the island is remarkable; where the steep sides of its high, jagged peaks reach the coast, they become great cliffs falling almost vertically to the sea. The island rises to a height of 650m in its W part.

The mountains on the E side of the island are generally either bare or with a growth of stunted trees. On the W side, they are covered with a rich vegetation, and most noticeably with forests of large tree ferns.

The shore is bold and has no off-lying dangers beyond 0.5 mile, except in the approaches to Baie de Haurei, where spits and shoals extend nearly 1 mile seaward.

A shoal covered by 30m of water (locally called Maaki Shoal) is located 20 miles ENE of Rapa Island.

1.80 Baie de Haurei (27°37'S., 144°20'W.) ([World Port Index No. 55857](#)), open to the E, is entered between Pointe Tekogoteemu and Pointe Maomao, 0.6 mile SSW. It is protected from the prevailing E winds, and from the heavy sea, by the shoals in the approach. The land surrounding the bay rises rapidly from the shore. The white dome of a weather station is visible on the S side of the bay.

Depths—Limitations.—The entrance is narrow and tortuous, and has a least depth of 5.8m. Three sets of range beacons mark the channel, which is only 90m wide and should not be attempted with any type of cross wind. Shoals, with a least depth of 1.2m, are prevalent along the edge of the channel. Shoal water extends 0.4 mile S of Pointe Tekogoteemu, and 0.5 mile E of Pointe Maomao.

Pilotage.—A pilot is recommended for vessels without local knowledge. The pilot may be requested in advance by radio through Tahiti. Local pilots may be available, but it should be kept in mind that he will have little experience in handling vessels other than local craft. It is strongly recommended that before the channel is attempted, a preliminary reconnaissance be carried out to verify the beacons, and mark the edges of the shoals to be avoided, when altering course from one alignment to the next.

Anchorage.—Anchorage outside the shoals is available, in depths of 11m, with Pointe Maomao bearing 279°, 1 mile distant. Within the bay, large vessels anchor when a stone temple with a gray roof situated on the S side of the bay bears 213°, in depths of 10 to 15m, indifferent holding ground. With E winds, the anchorage inside the bay is protected, but with W winds, violent squalls may blow down from the high land. Vessels over 100m in length should not remain anchored overnight.

1.81 Iles Marotiri (Ilots de Bass) (27°54'S., 143°30'W.) are a group of three islands and seven rocks. The group, which lies within an area of 2 miles, are rugged and practically inaccessible. The S and highest island rises to a height of 113m. The islands on the S and W sides of the group have growths of grass and small bushes. Rocky ledges extend up to 1 mile seaward of the group.

Neilson Reef (27°00'S., 146°00'W.) is a crescent-shaped reef on which the sea breaks. It has a least depth of 2.9m on its NE end. The reef is about 3 miles long in a N-S direction, and about 4 miles wide in an E-W direction.

Wachusett Reef (Wachusett Shoal) (32°18'S., 151°10'W.) was reported to have depths of 9 to 11m.

Breakers have been reported to lie 100 miles SE and 100 miles SW, respectively, from Wachusett Reef.

Earnest Legouve Reef (35°12'S., 150°40'W.) was searched for in 1982 and 1983, but was not found.

Sophie Christianson Shoal (41°26'S., 148°26'W.) was reported as a patch of discolored water with a depth of 9.1m; it has also been reported to break.

Volcan Macdonald (29°00'S., 140°15'W.), a submarine volcano, was reported in 1981.

Maria Theresa Reef, which was reported to lie in 37°00'S, 151°13'W, was unsuccessfully searched for in 1957. In 1983, the position of the reef was recalculated at 36°50'S, 136°39'W, and searched for, but not found. In any event, caution should be exercised in the vicinity of both positions.

1.82 Raivavae (23°50'S., 147°40'W.) ([World Port Index No. 55850](#)) is the farthest E of Iles Tubai. The island is formed by rugged hills, mostly covered with trees, which in most cases slope gently toward the sea; it rises to a height of 437m.

Raivavae is about 4.5 miles long in an ENE-WSW direction and about 1.8 miles wide, and is completely surrounded by a barrier reef, most of which is awash. In the NW part of the reef there is a break which provides an entrance through the reef. On the S side of the island, a rocky bank, with a depth of 20m, extends about 1.5 miles offshore.

Passe Mahanatoa (23°50'S., 147°40'W.) runs through the barrier reef, which is 1 mile NNE of Pointe Matoaitanata. The fairway is led through a channel 35m wide marked by buoys over a least depth of 4.7m. At the inner end of the pass there are depths of 4.3m. Entry into the pass is led by the beacons in line bearing 167°15'. After clearing the beacons marking Roches Totoro at the inner end of the reef, alter course to starboard until white leading beacons are in line bearing on 261°. Keep on this course until Pointe Matoaitanata's rocky extremity bears 130°, then alter course to port to 207° passing W of Beacon No. 12, 0.3 mile SW of Pointe Matoaitana, then adjust course to 201° to the anchorage in Baie de Rairua. Baie de Rairua offers the best anchorage in all of the Iles Tubuai. The bay is sheltered against winds from the E. One can anchor, in 11 to 12m, mud bottom, excellent holding ground.

A wharf, with a shed and a radio mast on it, is 40m long and has 4m of water alongside. It can accommodate small coastal vessels. A dolphin to the SW of its W end facilitates mooring. A slipway is situated at its E end.

Vessels without local knowledge wishing to enter should obtain a pilot, who can be summoned by displaying a large French ensign at the masthead; local inhabitants offer their services, but little confidence should be placed in them.

A sharp lookout from the masthead is necessary when entering to avoid the numerous shoal heads.

Passe Teavarua lies about 0.5 mile E of Passe Mahanatoa and it should not be used since the beacons are removed. A vessel too deep in draft for the entrance can anchor outside the reef, off the NW and SE coasts of the island. The tidal currents of the N end of the island set to the E on the flood and to the W on the ebb, and are strong enough to swing a ship in a stiff breeze.

Caution.—Discolored water has been reported to lie 5 miles NE of the island.

1.83 President Thiers Seamount (President Thiers Bank) (24°40'S., 145°55'W.) has a least charted depth of 19m. The seamount is about 6 miles long and lies in a NNW and SSE direction, with discolored water extending some distance from it.

Ile Tubuai (Tubuai) (23°22'S., 149°26'W.) is about 5 miles long E-W and about 3 miles wide. Mont Taita, 422m high, the highest point, is located in the E part of the island, and Hanareho, 325m high, rises in the SW part. These two peaks are joined by low land, and when seen from the N or S, the island appears as two separate islands. There are a number of other peaks which are of considerable elevation.

A barrier reef, partly submerged, surrounds the island; there is an opening on the NW side, about 1.5 miles wide. Two passes lead through this gap, the E of which has a least depth of 4m. Range beacons, in line, lead through the pass.

Pilotage is available and essential for the lagoon. Arrangements for pilotage may be made via radio. The pilot boards off the pass.

The village of Mataura, which may be reached by vessels drawing less than 3.7m, lies on the N shore of the island.

Deep-draft vessels may anchor outside the barrier reef, on the range line marking the E channel mentioned above, in depths of 15m, over a broken coral bottom, poor holding ground. This anchorage is reportedly usable only in offshore winds.

Anchorage is also possible 1 mile NNW of the wharf at Mataura Harbor by vessels with drafts of less than 3.7m in 6m of water, sand bottom and mediocre holding ground. It was reported (2000) that the wharf had been destroyed.

1.84 Rurutu (22°29'S., 151°20'W.) is volcanic in appearance; however, the low-lying parts of the island is wooded. There is no barrier surrounding this island, which is about 5.5 miles long N-S; the width of the island averages 2 miles. Baie de Moreai is on the NE and Baie D'Vaera on the SW coast and the reef fringing the coast around the island is 0.1 to 0.2 mile thick. On the NW part of the island, Mount Taatioe (22°27.8'S., 151°22.2'W.) rises to a height of 389m.

The village of Moerai is situated on the NE coast facing Port de Moerai (22°27.0'S., 151°20.5'W.).

The village of Hauti, 2 miles SSE of Moerai has a red roof temple that can be clearly seen. Two windmills stand on the heights to the W of the village.

The village of Avera is situated on the SW coast at the head of Avera Bay which is backed by high vertical cliffs. A red roofed temple is conspicuous.

Because of the steep incline of the bottom and its exposure to the swell from the W, it is not advised to anchor in Avera Bay even though it is sheltered from E winds.

In the approaches from N, the aeronautical radiobeacon at the airstrip, in position 22°26.1'S, 151°22.2'W, appears first over the horizon.

There is an anchorage in Baie Moerai, off the village, in a depth of 35m, with the belfry of the temple bearing 237° and the flagstaff bearing 158°. It has been reported (2002) that the temple is masked by vegetation and is difficult to see.

The port is entered through a 25m wide channel only suitable for boats up to 50 tons with a draft of 3.5m in good weather and with the absence of a SE swell. The entrance to the port is in alignment with two lighted beacons, painted red and white stripes, 0.1 mile apart on bearing 255.8° situated 0.1 mile N of the temple. The port has a quay in a SW direction and boats with 2.6m draft usually berth port side-to.

The access to the port becomes impossible when there is a strong sea or swell, causing a strong backwash.

Moses Reef (22°47'S., 151°13'W.), whose position is doubtful, lies 17 miles SSE of Rurutu; it has a least known depth of 2.7m.

1.85 Rimatara (22°39'S., 152°48'W.) is a densely-wooded small island, about 2 miles in diameter and 83m high at the summit of Uahu, that lies about 80 miles WSW of Rurutu. On the N side, a 460m wide coral reef fringes close to the island; a 650m wide coral reef fringes the S side.

There are three small passes on the N, NE, and the NW side of the island. Passage through them by small boats and landing is possible, but only in good weather.

Passe Oatahuna (22°38.2'S., 152°47.5'W.), the westernmost of the three passages, is mainly used as it gives access to a jetty at HW. A house, 50m away from the jetty, is conspicuous.

Amura (22°38.8'S., 152°49'W.) is the largest of the three villages on the island, where a cemetery is distinctly noticeable. **Anapoto** (22°38.7'S., 152°49'W.) is a village on the NW side, where a temple partly covered by trees is usually identified by canoes drawn upon the beach, is a landmark. In good weather, vessels anchor on the lee side of the island, sand and coral

bottom, at a distant of 0.3 to 0.4 mile WNW of the temple, in depths of 30 to 40m.

Vessels usually anchor off Amaru, in a depth of 30m, with **Point Teruahua** (22°38.4'S., 152°47.4'W.), a round shape on the NE side of the island, bearing 330° and 0.2 mile NE of the cemetery. Boats approach the island in fine weather; landing may only be possible on the lee sides.

Ile Maria (21°50'S., 154°42'W.) is a group of four small islands surrounded by a triangular-shaped coral reef whose sides are about 2 miles in extent. The reef surrounding the islands appears to have no opening, and within the reef the water is shallow.